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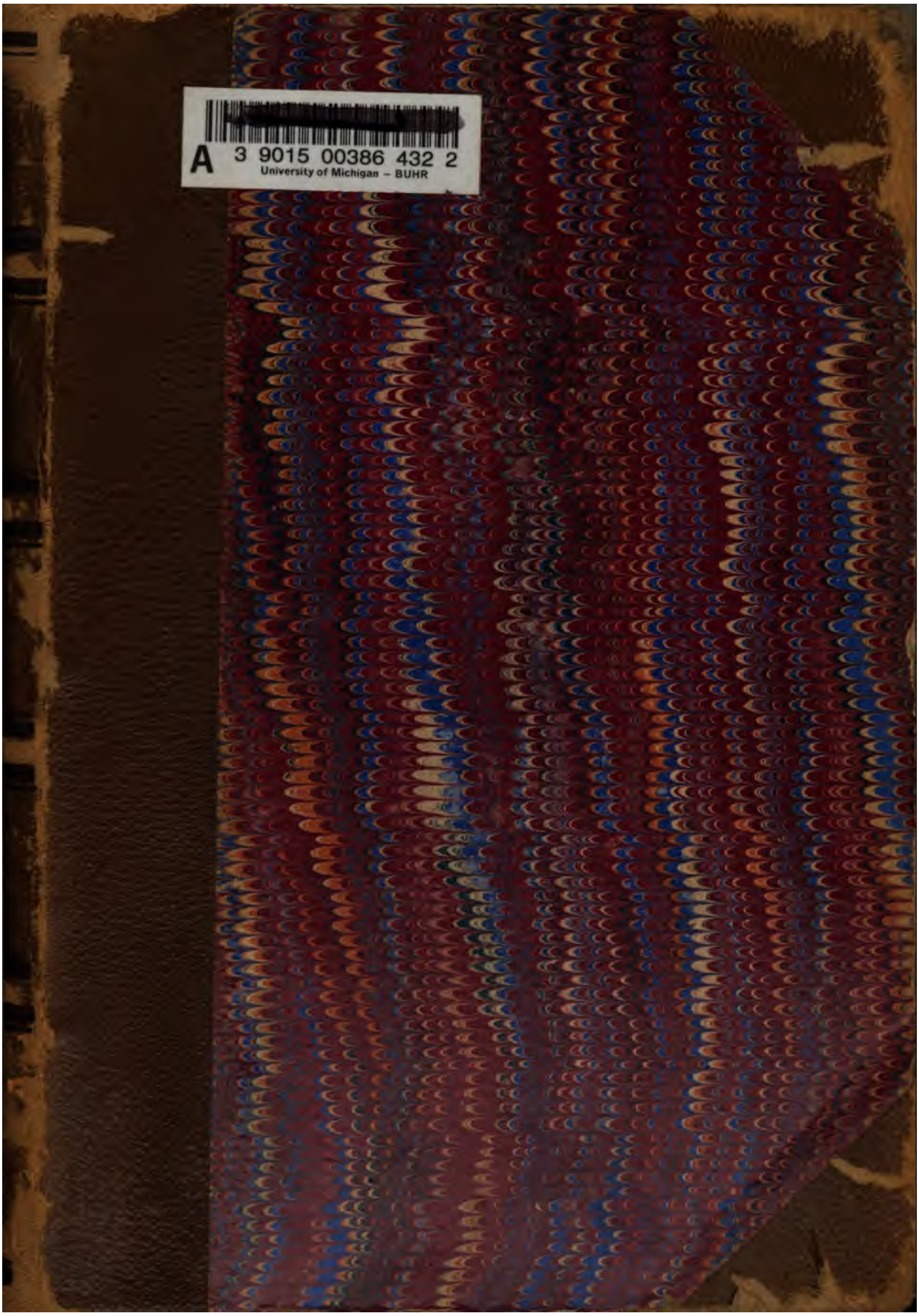
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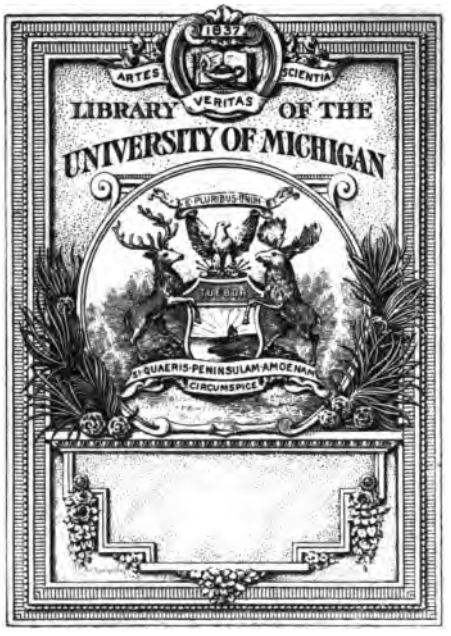
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Original Lectures.

ON DR. BROWN-SÉQUARD AND HIS RECENT LECTURES.

A LECTURE DELIVERED BEFORE THE CHICAGO MEDICAL SOCIETY, MAY 6TH, 1878.

BY J. S. JEWELL, M. D.,

(Professor of Nervous and Mental Diseases in the Chicago Medical College.)

(CONCLUDED.)

MR. PRESIDENT AND MEMBERS OF THE SOCIETY:

But one of the most striking classes of pathological proof of the decussation of the motor tract, is found in the now rather well known "secondary degenerations," first described by Tuerck, of Vienna, (*Ueber die second. Erkrankungen einzelner Rueckens-marks-strange u. ihre Fortsetzungen zu gehirn, Wien. akad. Sitz. Ber. Meth. Cl. Bd.* 6 *Jahrg.* 1851. 1 *Haelfte, Seite* 288 *fg.; Bd.* 11. *Jahrg.* 1853, 2 *Haelfte, Seite* 93, *fg.*,) and later by Charcot, Erb, Berger, and many others.

In this case it is rendered pretty certain that disease starting within the limits of what has been called the "motor zone" of the brain, will descend the motor tract until it reaches the level

of the pons and medulla, and then still following, apparently, the continuous motor tract, it *passes over to the opposite side of the cord*, and in that side descends. These cases can be easily explained on the view that the motor tracts decussate, as has been claimed, but not on the hypothesis of Dr. Brown-Séquard. These cases of "secondary degeneration" in reality powerfully support the hypothesis of a decussation of the motor tracts. I cannot go farther this evening into this very extensive subject; but I cannot pass on, without recalling what seems to me to be a fact, that all the evidence worthy of the name, whether anatomical, physiological or pathological, supports this view. But while this is so, I must confess that I have been always favorably inclined to the view of Dr. Brown-Séquard as respects the non-decussation of the motor tracts. I have often asked myself the question, *why* there should be such a condition. Why should not the motor fibers from one side of the brain go to the same side of the body? What benefit can arise from the crossed arrangement which could not be secured in a simpler manner? I have never yet been able to answer these questions for myself. But so long as the evidence shows so plainly that there *is* a decussation of motor conductors, so long will I admit it as a fact.

2. *Localization of function in the cerebral cortex.*

It was not until the time of Gall that any considerable progress was made in a knowledge of the inner structure of the brain. Whatever may be said of his vagaries in craniscopy and phrenology, he gave a great impulse to cerebral anatomy and physiology. But his crude and ill-digested notions met with a vigorous repulse from many quarters, especially from Flourens and his disciples, who rejected the doctrine of a localization of function in the brain, (more particularly the cortex,) in favor of an opposite form of doctrine, or that of a diffusion of special functions throughout the cortex. This latter doctrine affirms in substance that the nervous cells in the cortex—for the sake of an example—which cause remotely the motion of a muscle, are not located in any particular part of the brain, but are scattered throughout the cortex, widely distant from one another. The cells of the cortex, which are remotely concerned in moving the arm, are not found in one

cluster in one convolution, but they are scattered, some in this, and some in that one. Hence destruction of any one part of the cortex, while it may embarrass, cannot destroy or paralyze the movements of the arm. This is the view of Dr. Brown-Séquard. He utterly opposes the doctrine of a localization of function in the cortex of the brain. In order to show this, I will quote a passage from his lectures in this city.

He says (*Journal and Examiner*, p. 294, March, 1878,) "Contrary to what is now admitted, as regards instances of certain so-called psycho-motor centers, I will try to show that an agglomeration or cluster of cells located in * * * the brain, (the cells employed in moving the arm, for instance, and serving therefore for a center,) I will try to show, that such an agglomeration of cells does not exist anywhere, and that the cells which are employed in moving the arm for instance, are scattered all over the brain, so that destruction may take place in any part of the brain, without any paralysis of the arm; all these cells however, serving to move the one limb, or any other part, etc."

Many more such passages might be cited, and they would all contribute to make it clear that the view referred to of Dr. Brown-Séquard has been correctly described above. The proofs of a localization of function in the cortex of the brain, are of various kinds. I cannot go into these proofs, such as they are in detail, even if it were necessary, for it must be supposed most of those present are in a measure acquainted with them. But I cannot pass on without referring briefly to them.

Then, first of all, the doctrine is not only in harmony with, but rendered imperative, by the general principles of physiology. I do not know that this view can be better stated than it has been by Mr. Spencer in his work on psychology (vol. I. 573–4). I quote as follows:

"Whoever," says he, "calmly considers the question, cannot long resist the conviction that different parts of the cerebrum must, *in some way or other*, subserve different laws of mental action. Localization of function is the *law of all organization whatever*, and it would be marvelous were there here an exception. If it be admitted that the cerebral hemispheres are the seats of the higher psychical activities, if it be admitted that among these higher psychical activities there are distinctions of kind, which, though not definite, are yet practically recognizable, it cannot be denied, without going in

direct opposition to established physiological principles, that these more or less distinct kinds of psychical activity must be carried on in more or less distinct parts of the cerebral hemispheres. To question this is to ignore the truths of neuro-physiology, as well as those of physiology in general. It is proved experimentally, that every bundle of nerve-fibers and every ganglion has a special duty, and that each part of every such bundle, and every such ganglion, has a duty still more special. Can it be, then, that in the great hemispherical ganglia alone this specialization of duty does not hold? That there are no conspicuous divisions here is true, but it is also true in other cases, where there are undeniable differences of function—instance, the spinal cord, or one of the great nerve-bundles.

"Just as there are aggregated together in a sciatic nerve an immense number of fibers, each of which has a particular office, referring to some one part of the leg, but all of which have for their joint duty the management of the leg as a whole; so, in any one region of the cerebrum, each fiber may be concluded to have some particular office, which, in common with the particular offices of many neighboring fibers, is merged in some general office fulfilled in that region of the cerebrum.

"Any other hypothesis seems to me, on the face of it, untenable. Either there is some arrangement, some organization, in the cerebrum, or there is none. If there is no organization, the cerebrum is a chaotic mass of fibers, incapable of performing any orderly action. If there is some organization, it must consist in that same 'physiological division of labor,' in which all organization consists; and there is no division of labor, physiological or other, but what involves the concentration of special kinds of activity in special places."

It may be objected by some, in behalf of Dr. Brown-Séquard's doctrine, that the remarks of Mr. Spencer are not really aimed against it. But I am unable to see how the views of the former can be reconciled to the general, and with the exception of the cerebral cortex—if it is an exception—the all but universal principles of physiology. The sensory and motor nerves are distinct. Each nerve, as a rule, whether motor or sensory, has its special peripheral area of distribution, and its special central nucleus and region of termination. Each step in the progress of knowledge of the spinal cord and medulla only serves to render more clear the fact, that special tracts of gray matter of the same are charged with special functions. The same general view begins to be something more than a surmise as regards the basal system of ganglia, upon which the peripheral nervous system converges.

Up to this point, localization of function cannot be denied with any show of reason. But above this point it is denied by Dr. Brown-Séquard. It is assumed as highly probable by those who

hold to the localization of function in the cerebrel cortex, that the fibers which arise from the cells of the masses which compose the "basal system," as they pass upward in the *corona radiata* of Reil, connect particular areas of the gray matter of the basal system with particular regions of the cortex, in the same manner as in the peripheral nervous system, the fibers of which connect particular parts of the gray matter of the cord or medulla with the same muscles, etc., as a rule. An impression produced at a particular part of the periphery is conveyed in different individuals (save in anomalous cases) essentially to the same part of the gray matter in the cord. It passes up then by preference, in a certain part of the cord, medulla, crus, etc., into or through a distinct part of the basal system, and from thence along a distinct fiber or bundle of fibers to a definite part of the cortex, even in different animals, as a rule. This view seems absolutely necessary to regularity of action of the nervous system.

But Dr. Brown-Séquard thinks, apparently, that the muscles which move the right hand—or say the index finger—if excited from the cortex are not excited from any special part of it, but from *any* part. There are no *centers* in the cortex, as in all other parts of the nervous system. One cell, for example, which subserves this purpose (if any such cells exist) is to be found in every convolution of the brain. This makes it necessary that one or other or all of certain kinds of nervous mechanisms should exist in the brain. These cells must be either all connected together, or they must be distinct *inter se*. According to Dr. Brown-Séquard most probably the latter is true. This admitted, one of two other suppositions must be true. Either the fibers from each of these widely separated cells must make their way independently to the same part of the basal system, or to different parts of the same, most likely the latter, according to our author. So that instead of one part, many parts of the basal system would be simultaneously excited, in order to finally move the muscles of the right index finger. But if only *one* cortical cell is excited, instead of many, which one out of the hundreds of cells probably devoted to this purpose shall habitually act? What an infinite complexity of fibers does not this doctrine of Brown-Séquard's render necessary? But if motor cells for the muscles of the index finger are

"scattered broadcast" all through the cerebral cortex, the same must be true for excitor or sensory impressions. Though they may start from some definite peripheral area of the body, as the retina, and be conveyed to a certain part of the basal system—let us suppose—yet if the doctrine of Dr. Brown-Séquard were true, the visual impressions, if they are sent to the cortex, may go to any or all of its parts, for the cells for the final appreciation of visual impressions are disseminated in all parts of the cortex. It would be necessary for the fibers of the optic tract (nerve) after being traced back to a basal nucleus to which they lead, to give off a vast complex of fibers to the cortex, each one of which, if all the others were destroyed, might serve the purposes of visual perception. But what anatomical proof have we of such a state of things as Dr. Brown-Séquard supposes? None whatever. It is simply made possible by our anatomical ignorance.

I have no hesitation in saying, that the anatomical evidence, so far as it is clear, is in favor of a localization of function in the cortex. I am ready to submit the details whenever a suitable opportunity offers, but cannot do so this evening.

The physiological evidence is mainly composed of the results of the researches of Fritsch and Hitzig and Ferrier and many others, now so generally known. They all tend to show the existence of limited cortical areas which for the same animals have peculiar functions. Thus far the results of experiment have been in many respects unsatisfactory, but out of the whole, the general doctrine of a localization of functions in the cortex has clearly emerged. But the conditions of success are numerous and delicate, and are with difficulty complied with. One of the first steps taken, has been the localization of an area lying about the fissure of Rolando, as the so-called "motor zone." From within the rather ill-defined limits of this area, it has been found possible to provoke contractions of various muscular groups by electrical excitation of the cortex—or of the fibres within or immediately beneath it. Particular spots within this area have been fixed on, from which the contractions of special groups of muscles can be excited *on the opposite side* of the body. These definite spots have been called "psycho-motor" centers. They have been imagined, on pretty good grounds, as containing a group of

motor cells worthy of being called a nervous center, and from which the *will* acts, in the exercise of *volition*, to excite a definite *purposive* contraction. There must be some part of the brain from which such actions may be excited. The experiments touching this subject, conducted on the higher animals—especially monkeys—have now become so numerous and critical as to leave one in a state of surprise, when they consider the utterances of Dr. Brown-Séquard and a few others, chiefly his pupils, such as my friend Dr. Dupuy. For some of the details I must refer you more particularly to the work of Dr. Ferrier, republished in this country—a work all should carefully read, who seek information on this subject. Particular spots have been designated by Dr. Ferrier and others, within the "motor zone," excitation of which provoke with singular regularity contractions of special muscular groups on the opposite side of the body. Destruction of the same spots have with almost equal uniformity led to paralysis or pareses of the same muscles. To enumerate and critically discuss this phase of our subject adequately, would require a course of lectures. But in the presence of existing information, I am willing to make the prediction that before five years shall pass, no doubt will exist in the mind of any well-informed and unprejudiced physician as to the truth of the doctrine, against which Dr. Brown-Séquard has raised his voice, in his course of lectures in this city, and in other lectures and writing delivered elsewhere.

I have now to mention that quite recently, Drs. Bevan Lewis, and Henry Clarke of London, have begun to supply the minute anatomical evidence of the correctness of the doctrine of a localization of function in the cerebral cortex. In a paper (January last) in the *Proc. Roy. Soc.*, London (and in another highly interesting paper in "*Brain*," a recent periodical, published from London,) they have described the "giant or motor cells" of the cortex, of Betz, found within the "motor zone." They find them chiefly confined to this zone, but gathered *into constellations or centers*, especially at the exact spots located by Ferrier as the seat of motor centers. Their anatomical discoveries, taken in connection with those of Ferrier, Hitzig and others, are certainly remarkable. I cannot discuss, this evening, either the

facts which seem to support, or the difficulties (for there are difficulties) of this doctrine. But I cannot see how, in view of the anatomical and physiological evidence at present in existence on this subject, any one can reasonably assume the position of Dr. Brown-Séquard.

As to the pathological evidence it is becoming abundant and is rapidly on the increase. Cases of limited lesions of sense and motility in man, in which examinations post mortem, have revealed demonstrable material lesion of the cortical centers, presumably governing such functions or parts are now very numerous and many of them critical on account of the application to them of the best methods known and by thoroughly competent hands. The best collection of such cases is in a recent number of the *Rivista Speriment. di Freniatria, etc., anno* iv, *Fascicolo* 1., p. 1, 1878. (*Le Localizzazioni Motrici della Cortecci Cerebrale studiate speciale dal lato Clinico, dal dott. Maragliano*). Ninety-seven cases are collected from various sources and analyzed in this paper, and I must say when they are compared with the heterogeneous and uncritical collection of cases of Dr. Brown-Séquard, of lesion of the brain, either with absence of symptoms, or with different symptoms, that the disparity is enormous, as to scientific value, the preponderance being wholly on the side of the cases which support the doctrine of a localization of function in the cortex.

This subject has been discussed in a multitude of papers from the best hands, especially within the past year or so, and the result of the whole is, so it seems to me, to place the general doctrine on a permanent basis. But there are yet special difficulties, many of which have been industriously used (and I had almost said misused) by Dr. Brown-Séquard in his recent lectures in this city. But I have no doubt they will be removed in due time.

Dr. Brown-Séquard relies on certain experiments on the lower animals, but especially on pathological cases, to support his doctrine of non-localization of function in the cortex. But I have no hesitation in declaring that, as compared with the evidence on the other side, whether physiological or pathological, it is worthless.

Quite recently Dr. Ferrier has discussed this subject afresh in

a course of lectures, now being published in the *British Medical Journal*. In these lectures he has undertaken to answer many of the objections of Dr. Brown-Séquard, and in a manner which must be satisfactory to nearly all, except the latter.

I would be glad, if I had time, to discuss Dr. Brown-Séquard's use (abuse as I was about to say) of the principle of *inhibition* and its contrary, in explaining paralysis and convulsions from brain disease. No one disputes intelligently that we may and do have *inhibitory paralysis*. Dr. Brown-Séquard cannot be permitted to monopolize this principle (of inhibition), which he was not the first to notice and apply. No one objects to this principle, or to admitting it as a factor in paralyses, especially from brain disease. But Dr. Brown-Séquard contends in its favor, as if he had a host of opposers, or as if he alone among physiologists admitted it. Among the real objections to his mode of using this principle in explaining paralyses from disease of the brain, is this: His gratuitous use of the principle of inhibition to explain how it comes to pass that disease in one side of the brain produces paralysis in the opposite side of the body, in such way as to preserve his assumption in regard to the non-decussation of the motor conductors. He sacrifices a multitude of apparent facts, at the point of a bare and unprovable assumption. In doing so, Dr. Brown-Séquard has apparently been bereft of all his former candor and caution in reasoning. His "cases" are *not* critical; they do not satisfy the reasonable demands of scientific proof. But I can do little more than challenge the positions taken by the lecturer. It may be that I can hereafter refer to this subject in papers before the society, if opportunity should offer. But it is now being so amply discussed by various competent persons that the time cannot be distant when all reasonable doubts will be removed, and the doctrine of a localization of function in the cortex become a recognized principle in nervous physiology.

Original Communications.

RAPID DILATATION OF THE FEMALE URETHRA IN THE DIAGNOSIS AND TREATMENT OF CHRONIC CYSTITIS.

By Wm. H. Byford, M. D.

M. C., a German by birth, was 26 years old when I first saw her. She was the mother of two children, the first two years old, the second five months. She was short, stout and, up to the time of her first confinement, had enjoyed uninterrupted health. The confinement, however, was severe and somewhat protracted. She was attended by a midwife, and all that I have been able to ascertain of her history, pertinent to the present report, is that she suffered for several months during lactation from irritability of the bladder. Apparently, however, she had entirely recovered from this before her last pregnancy.

During the last two months of her second gestation she suffered from dysuria, which, as labor approached, was attended with marked symptoms of inflammation of the bladder, such as inability to retain the urine more than half an hour or an hour at a time, a burning pain and tenderness in the pubic region, with a sense of weight and tenesmus.

At the time I first saw her, just five months after the second child was born, she was standing with her head and upper part of the body bent forward and her feet widely separated, a position she maintained as much as possible, on account of the pain she experienced while sitting or lying. Every ten or fifteen minutes she was seized with great vesical tenesmus, which was attended with the forcible expulsion of a small quantity of urine. This

evacuation of the bladder, although the urine was so small in quantity, would bring some relief for another ten or fifteen minutes, at which time occurred a similar paroxysm of pain and urinary discharge. In this way she passed the time until she became so exhausted with fatigue, suffering and wakefulness that she would be obliged to assume the recumbent position, and doze between her painful paroxysms. When she thus attempted to sleep she would lie but a few moments, as the pressure of a small amount of urine would arouse her—to secure its expulsion—by an uncontrollable tenesmus.

Several months of such agony imprinted upon her face marks of great suffering, and induced a general failure of mental and physical power. Her pulse was small, and about a hundred to the minute; skin cool and damp; tongue coated and appetite poor. The urine was retained so short a time, and expelled in such small quantities, that I could not procure any for examination. The external genitals were excoriated and covered with mucus, and large urinary deposits covered the labia and perineum. The labia were tumid and their inner surfaces so raw that they frequently bled. The parts were so tender that I found it impossible to make any examination without subjecting her to the influence of an anæsthetic.

When she was completely under the influence of ether, a large steel sound was introduced into the bladder and swept around in every direction without encountering anything solid therein. The forefinger of the right hand was then introduced through the urethra into the bladder, which was found to be so contracted that every part of its cavity could be easily explored. The walls were very thick and rigid, and the mucous membrane studded with pendulous granulations or projections, easily perceived by the touch. These were forcibly detached by the finger until, as far as possible, all were thus disposed of. Two or three ounces of blood were lost during this operation. The distension of the urethra was accomplished without rupturing any of the muscular fibers surrounding it. For fear of a too rapid contraction of the sphincters, the middle finger was introduced to still further dilate the urethra. I entertained no fear that this great distension of the urethra would result in the patient's inability to retain her

urine. Indeed, I apprehended that it might be necessary before the cure was completed to repeat the dilatation.

After the operation was finished, Nov 15th, 2 p.m., the patient promptly and thoroughly recovered from the effects of the ether, and at 3 p. m. was comparatively comfortable. One drachm of acetate of potash every two hours was prescribed. An injection into the bladder was ordered of a quart of water at 112° Fahrenheit twice daily; and a tepid sitz bath for half an hour twice a day also. Nov. 16th; The injection last night caused slight pain, which very soon passed off, and was followed by a sense of comfort. The urine flowed freely through the dilated urethra, and the patient slept quite well a good portion of the night.

Nov. 17; The patient rested well, no pain, had free secretion and discharge of urine. Treatment to be continued. Nov. 18; Still improving, and expresses herself as greatly relieved from the suffering she experienced before the operation. Nov. 20; Patient still improving in every respect. The excoriations of the external genitals are disappearing; she now retains her urine two hours, and passes it without discomfort. Nov. 24; The treatment has not been changed and the patient continues to improve. She retains her urine for five or six hours without inconvenience. The catheter now passes three inches into the bladder, and the injection is a source of great comfort. The urine is clear and but little mucus settles at the bottom of the vessel. The potash is omitted to-day, and the patient directed to take one teaspoonful of the syrup of the tincture of iron after meals, three times a day. This syrup contains fifteen minims of the tincture to the teaspoonful. The sitz baths and injections are to be continued.

This treatment was pursued until Dec. 6th, when the patient left the hospital at her own request, believing that the treatment was no longer necessary.

Two years ago there was, in the Mercy Hospital, a case of severe chronic cystitis in a little girl ten years of age, in which it was necessary to dilate the urethra with the little finger four times. So far from this practice having been attended with any bad results, the little patient was discharged at the end of four months entirely cured, her ability to retain her urine being perfect. Up to this time the disease has not returned.

Three years ago, I saw an interesting trial of this operation in a very unfavorable case, in consultation with Prof. D. T. Nelson. The patient was an Irish woman, totally broken down in health from a complication of diffculties connected with chronic and very distressing cystitis. She was the mother of several children, had had difficult labors, and very poor attention; and had been subject to symptoms referable to uterine and vesical disease for several years. She was, at the time when I saw her first, afflicted with fibrinous deposit in the omentum, which strongly resembled a tumor, the result of a somewhat acute attack of general peritonitis some months before. The spleen was enlarged, and from the great functional disturbance of the heart it was not altogether certain that that organ might not be affected with organic disease. She was greatly reduced in strength, and anasarcous to a moderate degree. She was constipated, had a poor appetite, and altogether justified the assertion I have just made, that she was totally broken down in health. The most distressing of her symptoms, however, she referred to her bladder. The dysuria was so severe and continuous, that she had no rest except under the influence of opiates. Large scales of phosphatic deposits, with pus, mucus and sometimes blood, were passed from the bladder with the urine in most agonizing paroxysms. In addition to the judicious treatment which was being pursued by Dr. N., I advised him to pass his finger into the bladder as often as necessary to keep the urethra sufficiently patent to permit of a free discharge of the contents of the bladder, and if necessary wash the organ out with warm water.

As soon as the dilatation was performed the patient began to improve, and the improvement steadily progressed. She is now in the enjoyment of a very fair condition of health. The disease of the bladder, however, was so serious as to require repeated dilatation for about a year from its commencement. The patient soon comprehended and appreciated the great relief afforded by introducing the finger through the urethra, and for a long time before she entirely recovered, when the irritation became very annoying, she would perform the operation herself.

The patient should be prepared for the operation of dilatation of the urethra, by thoroughly emptying the alimentary canal, by

a liberal use of the warm bath; scrupulous cleanliness of the external genitals, and large injections of warm water into the bladder, by means of a double catheter twice a day for at least forty-eight hours.

We should always be careful before resorting to forcible dilatation of the urethra, to examine circumspectly the pelvic cavity and lower portion of the abdomen, in order to assure ourselves that there are none of the inflammations present which so often complicate vesical inflammation in the female pelvis, such as chronic or acute cellulitis, local peritonitis or a considerable amount of metritis.

Any of these complications would render the operation hazardous and would contra-indicate it.

I have been made acquainted with one instance, in which dilatation was performed, where peritonitis supervened in less than twenty-four hours, and, by becoming general, led to a fatal result. When none of these local complications are present, we may generally expect a favorable result. After dilatation, care must always be taken to exclude any of the ordinary causes of excessive reaction. This may be done by keeping the patient strictly quiet for three or four days, surrounding her with the best hygienic conditions, and relieving pain, should any occur, by administering full doses of opium. The bowels ought to be kept from moving for three or four days. At the end of this time gentle evacuations may be secured by repeated small doses of sulphate or citrate of magnesia. The diet for two or three days should be easy of digestion and nourishing.

The operation is very simple and easily accomplished, usually requiring not more than ten minutes for its performance. The one thing to be avoided is too much violence. Generally it is best to begin by pressing the end of the little finger against the meatus with gentleness, firmness and steadiness. In a short time, the muscular fibres are felt beginning to relax, and very soon they will permit the introduction of the finger. Having held the little finger in this position for a few minutes, it should be withdrawn, and the index finger introduced with the same precaution, giving the muscular fibres time to relax and permit the finger to enter, instead of urging it forward so rapidly as to rupture them.

TWO CASES OF SYPHILIS, IN WHICH THE INFECTION TOOK PLACE IN RATHER UNUSUAL SITUATIONS.

By George H. Rohé, M. D.

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In the current (July) number of the *Archives of Dermatology*, I have reported a case where syphilis had been communicated by a bite on the nose, inflicted during a fight. Since reporting that case, two others have come under my observation, which appear to me of sufficient interest to warrant publication.

Case I. *Chancre of the Tongue.* C. K., white, American, widow, 27 years of age, and by occupation factory operative, consulted me on the 24th of May, 1878, with the following history:

About the middle of last February she noticed a whitish pimple on the surface of the tongue, near its tip, which was slightly painful. This pimple became larger, hard at the base, and eventually resulted in an ulcer. Up to this time the only application she had used was a mouth-wash of borax, which seemed however to do no good. She then consulted a physician, who cauterized the lingual ulcer several times, and gave her some pills which produced salivation. The tongue became greatly swollen and painful, causing considerable trouble in eating and speaking. Shortly afterward, her throat became very sore, and she was sick and feverish, being compelled to take to her bed for a few days in consequence. About three weeks ago, while dressing, she discovered a brownish rash upon her body, and consulted me with regard to it, on the date mentioned above. Her husband died over a year ago, of some phthisical affection. He never had any cutaneous eruption, to her knowledge. Two children died soon after birth, of "brain trouble;" both had sore eyes and "a wheezing" in the throat, but no skin disease. One child, the eldest, eight years old, is living, who is deficient in mental capacity, but otherwise appears healthy.

Present condition.—Her face, arms and body are thickly covered with reddish, or brownish-yellow, flat papules, the summits of which are slightly scaly. Upon the face, the papules are localized especially about the angles formed by the alæ of the nose with the cheeks, and the angles of the mouth. The submaxillary glands are much enlarged and tender; the post-cervical only slightly so. On examining the mouth, an oblong, slightly excavated patch, with a deep-brown glossy base, is seen near the tip of the tongue, occupying the middle line of the organ. The base is firmly infiltrated, the induration being rather limited in extent. The throat is still red, but not painful. The inguinal glands are very slightly enlarged, but not indurated or tender. An examination of the genitals reveals no lesion or induration of the vulva or vaginal mucous membrane. The anterior segment of the os uteri is perfectly normal to the touch, while the posterior segment is firm and hard, conveying to the finger the sensation of the induration of a cancerous infiltration, or a firm cicatrix, more nearly than anything else I can compare it to. The os is normal in size, and neither painful nor tender to the touch. She does not remember having any sore or other trouble about her genital organs recently; and absolutely denies any sexual intercourse since the death of her husband, which, as stated above, occurred over a year ago.

None of the other operatives, in the factory where she works, had any sore mouth or skin affection, to her knowledge, but a young man who visited frequently at her brother's house, and whom she occasionally met there, had a copious eruption on his face. She remembered that on one occasion they had some sort of game, consisting in writing little notes to one another and passing them around the room. The young man referred to was present and took part in the game. A pencil belonging to him was used and passed around, but she has no recollection of putting the pencil in her mouth. It was some time after this that the pimple appeared on her tongue. The eruption on the skin was characteristic and sufficient to justify the diagnosis of syphilis, and the regular consecutive appearance of the other symptoms following the affection on the tongue, led me to believe the latter to be the primary lesion, which belief was strengthened by

the negative result of the examination of the genitals. The induration of the posterior segment of the os uteri I believe to be either cicatricial or cancerous. She was put upon inunction with mercurial ointment, after Sigmund's plan, and directed to take fifteen drops of tincture of chloride of iron three times a day. Under this treatment the eruption rapidly faded, and has at the time of writing nearly disappeared.

Case II. J. S., American, male, 24, shoemaker; came to my clinic, at the College of Physicians and Surgeons, on May 30, 1878, with the following history: About six weeks ago a sore came upon his upper lip, which became much swollen; about a month later his throat became very sore, and about a week ago he noticed an eruption upon his body. His present condition is as follows: The face, body and extremities are covered by a copious erythematous syphiloderm. The upper part of the chest, face and back of neck are also thinly studded with papules. On the upper lip, a little to the left of the middle line, is a swelling about the size of a pigeon's egg, with the mucous membrane everted and excoriated; the submucous tissue is the seat of a thin, firm infiltration distinctly circumscribed. The submaxillary glands are very much enlarged and tender; post-cervical glands also enlarged; inguinal glands very slightly enlarged, not tender to the touch. The mucous layer of the prepuce and the glands is the seat of five or six small, lenticular excoriations, without induration, which look like papules of the mucous membrane deprived of their epithelial covering. These spots had existed only four or five days. He has not had sexual intercourse for over four months. Denies having ever had any affection of the genital organs, either ulcerative or blennorrhœal. He remembers kissing a girl having a sore lip, about two months ago.

The evolution of the disease in its various stages in this case, is entirely consistent with the assumption that the sore on the lip was the initial lesion, and that this was the result of inoculation during the suspicious kiss. It is to be regretted that there could not be confrontation in this case to decide the question.

He was ordered mercurial inunction, and calomel to be dusted on the lip. As he did not return to the clinic, the result of treatment could not be followed up.

CASE OF LARGE POLYPUS OF THE UTERUS.

By D. I. McMillan, M. D., Sunbeam, Ill.

I was called, Feb. 20, 1878, to see Mrs. W., who was reported as suffering from labor pains, with something also protruding from the vulva. She was a farmer's wife, 45 years of age, and the mother of six children, the youngest aged 10, some of the oldest married.

I found another physician in attendance, who had, on the day previous, prescribed for what he supposed to be menstrual disorder. At that time she was losing a good deal of blood, and was suffering pain. He supposed that he felt above the pubis an enlarged uterus, which resembled in size and consistence the uterus after labor. Simple remedies were given, and the case dismissed. On this morning he was called in great haste to see her again. She had been suffering most of the night with severe labor pains accompanied by flooding, but as he lived at a distance of five miles he did not see her until two o'clock in the afternoon. He then found a foreign body outside of the vulva, and not satisfied as to its nature nor as to the proper treatment, he requested the counsel of another physician, and I was then sent for. It was eight o'clock when I reached the patient, and found her in the following condition: She had the pallor of death, and seemed completely exsanguine, with an anxious expression of countenance; the pulse was thread-like and very rapid, probably 140 or 150 to to the minute; her extremities were cold and her body bathed in a cold sweat; the tongue had the same bloodless appearance; the respirations were hurried and the eyes protruding, as in suffering from dyspnœa.

On examination, I found an ovoid tumor, nearly as large as a fœtal head, outside the vulva and lying on the bed between the thighs. I say ovoid, but perhaps the best descriptive term would be pear shaped, the upper or stem end of the pear representing the peduncular attachment which passed upward through the vulva. This pedicle was nearly as large as the wrist, or between two and

three inches in diameter, and could be traced upward through the os. On account of the large size of this pedicle, which nearly filled the vagina, it could only be traced as far as the finger could reach. The color of the mass was dark red, the pedicle lighter and covered, as it was supposed, with coagulated blood. There was, however, no oozing of blood from any part. In consequence of the external appearance, shape and consistence of the mass, considered in connection with the fact that the womb could not be felt, and that the patient complained of pain when the tumor was handled, we supposed there was partial inversion of the uterus. The darkened appearance we supposed to be caused by venous engorgement from obstruction to the flow of blood through the constricted neck of the womb. The size of the mass was supposed to be owing to the length of time that had elapsed since its extrusion. This took place in the morning, some sixteen hours before, and if there had been any vascular obstruction, the longer this existed the greater would have been the consequent distension and tumefaction.

As we were not satisfied regarding the diagnosis and proper plan of treatment, further advice was requested, and Dr. Frazier, of Viola, was summoned. During the absence of the messenger (a period of several hours, owing to the distance), free stimulation was employed, in order if possible to secure reaction. No measures of this sort had been taken, and the patient was bordering on collapse. To this end alcoholic stimulants were freely used internally and bottles of hot water applied externally. The condition of the patient was not, however, greatly improved by this course. There was the same thready pulse, hurried respiration and coolness of body and extremities.

On Dr. Frazier's arrival he made an examination, and pronounced the mass that we had taken for an inverted uterus, a bloody tumor, with the uterus perhaps partially inverted and enclosed in the blood coagula. He proposed the immediate separation of the uterus and removal of the fungous body. The vitality of the mass was tested by running the finger through the larger portion in different places; no hæmorrhage followed. He then proceeded to remove the larger portion by 'twisting' it from the pedicle. Considerable force had to be used to detach it. After this was

accomplished, the pedicle was attacked. The tissue composing this was very much more dense than that composing the body, and was removed with no little difficulty. Strong traction was made, and the pedicle and fundus of the womb were drawn outside of the vulva. In fact, the tissues composing the pedicle were so nearly like ordinary muscular fiber, that it took considerable discrimination to tell where it ended and uterine fiber commenced. It was detached piecemeal, the finger being used to slit it up and the shreds being peeled off one by one. So firm was the attachment to the fundus that its detachment seemed to require as much force as the removal of muscular tissue from periosteum or bone.

The mass removed, the uterus was easily replaced by a uterine repositor that I happened to have. This could however have been as easily accomplished with a blunt pointed stick. The uterus was perfectly flaccid; no more resistance was experienced than in replacing a prolapsed rectum. No hæmorrhage followed, not even slight oozing of blood. On the site of attachment, where the pedicle was removed, the uterine tissue was blanched, having the same bloodless appearance as the external aspect of the body. This showed how completely the blood had been drained away, since a large vascular tumor had been torn away piecemeal from the uterine surface without hæmorrhage.

The removal of the tumor and replacement of the organ to its normal position gave no relief. The patient was very much exhausted after the operation. A great deal of pain was manifested, especially during the removal of that portion of the pedicle attached to the fundus. The operation over, free stimulation was resumed. Besides external heat and alcoholic stimulants internally, a solution of sulphate of cinchonidia in brandy (quinine not being at hand) was used hypodermically; all, however, without effect. The pulse never grew stronger, but perceptibly weaker, and the patient gradually sank, and died six or eight hours after the operation.

Transfusion of blood was of course greatly needed in her case, but no apparatus of such kind was attainable, not even a syringe. That she died from loss of blood was manifest. Shock, of course, had its effect, but it is my opinion that if a few ounces of blood

could have been thrown into her veins immediately after the removal of the tumor, she might be living to-day.

The tumor was, almost certainly, a polypoid growth. Dr. Frazier also, after examining the tumor, and learning the patient's history, concluded that the tumor was a polypus. Her previous history I afterward learned from a lady living in the vicinity. She had been complaining for three or four years of great trouble at the menstrual periods, which were normal as to time, but always excessive and offensive. She was always prostrated and in bed from one to two weeks after each epoch; in fact, so regular was this that she always made preparation for this event by providing for extra changes of linen. Pain was also a prominent symptom during the menstrual flow. She had had an anæmic look for several years. This would indicate that the commencement of the tumor dated back several years, or from the commencement of her uterine trouble.

The composition of the tumor would also indicate its nature. The examination of its structure was made only by the naked eye, and of course could only be superficial. Its entire length, pedicle included was perhaps eight inches. Its weight was probably two, or at most three, pounds. The large portion of the mass was of low vitality. In the language of Dr. Frazier, who examined it the next morning, "It was composed of loose fibrous bands, the interstices filled with clotted blood; over the upper and larger portion was found a membrane more or less tough and resisting." The pedicle was much more dense, as may be readily inferred from the extraordinary difficulty attending its removal. The previous history of the patient, and the character of the growth, both point, therefore, unmistakably to polypus as the real source of the difficulty.

If the character of this tumor had been recognized in the morning, its prompt removal and the replacement of the partially inverted uterus would have been indicated. This, of course, was required fully as much when I saw the patient. I must admit, however, that the resuscitation of the patient seemed most imperative. Although there was no hæmorrhage, and had not been, as far as I could learn, after the expulsion of the polypus, it was nevertheless quite plain that the woman was dying from loss of

blood and shock. The dragging down of the womb by the tumor had of course to be relieved, as this was increasing the prostration of the patient, although hæmorrhage had ceased hours before.

It is a question in my mind whether the womb should have been pulled down and the pedicle torn from its uterine attachment, as this produced pain and increased the prostration. Had the patient lived she might also have suffered from hæmorrhage at the seat of the implantation of the pedicle. The better plan would have been (it seems to me), to have ligated the pedicle, cut the tumor off, and then returned the womb to its normal position. As has been stated, it was not easy to discriminate between pedicle and uterus, so much did they resemble each other in consistency and appearance, great care being required to avoid tearing away a portion of the womb.

CAUSES OF THE LOW RATE OF MORTALITY AMONG THE FOREIGN RESIDENTS AT THE SANDWICH ISLANDS.

By Henry M. Lyman, M. D.,

(Professor of Physiology and of Nervous Diseases, Rush Medical College, Chicago.)

The remarkable paper by Judge Caton in the June number of the Journal and Examiner regarding the low rate of mortality which obtains among the foreign inhabitants of the Sandwich Islands, while the native inhabitants are rapidly diminishing in number under the influence of epidemic diseases and the untoward circumstances of a sudden change from the savage state to comparative civilization, affords interesting evidence in corroboration of the doctrines enunciated by Herbert Spencer in his "Principles of Biology." Spencer shows that the natural tendency of things is in the direction of an equilibrium of forces. Every organized body is the result of an equilibrium between internal forces and external forces. Every living body is the result of the establishment and preservation of an equilibrium between its internal vital forces and the external, incident forces of nature which tend to disintegrate every existing form. Now,

when the incident forces, whether physical, spiritual, or both—it makes no difference which—are numerous and complicated, a corresponding multiplicity and complexity of the internal vital adjustments will be necessary, in order to effect the preservation of a living equilibrium. The result will be a highly organized and enduring structure. This is precisely the result which experience discovers. In the temperate zones of the earth the number and complexity of the conditions of existence is the greatest. It is here that the greatest changes and varieties of temperature and climate are experienced. It is here that, consequently, the greatest variety of occupation and mode of life is possible, so that it is in precisely this portion of the earth that we find that complexity and perfection of physical structure, *growing out* of perfect equilibrium of forces, which gives special toughness and power of endurance to that portion of the human species which inhabits the favored zone.

There is, however, another consequence of the natural tendencies towards equilibrium which is not so conspicuous, and is therefore often overlooked by medical writers. When the incident forces have operated with great uniformity for a succession of generations upon a given race of beings, there becomes established such a perfection of equilibrium between vital forces on the one hand and the antagonistic forces on the other, that a new element of danger is evolved. Exposed to a uniform succession of similar incidences, the living organism becomes exceedingly strong in its power of resisting the impact of that particular group of forces; but, experiencing no need of adjustment against other kinds of incident force, it becomes less and less complex in its structure, and correspondingly less capable of resisting the shock of new and unexpected modes of motion. This lower form of organization is found in those regions where the conditions of life are characterized by great uniformity. It is reduced to its lowest terms of simplicity, and consequent lack of adaptability to various and sudden changes, in those parts of the earth where the temperature, climate and mode of life are the most uniform, and where the species is most isolated. These are the conditions which have made the Pacific islanders what they are; hence their inferior power of resistance when exposed to new influences that are opposed to life.

Such is the Spencerian mode of stating the case. Philosophy aside, we recognize the same facts every day, and much of our practice is based upon a semi-conscious recognition of these facts. Take, for example, a family of young children among the wealthier classes in society. Surround them with every luxury, in a winter-palace, with a constant temperature of 72° F., and they will for a time enjoy excellent health. They are like a tribe of Polynesians shut up on a little island in the middle of the Pacific. But the little things, though they never have measles or scarlet fever, or any other horrid infectious disease, become surprisingly delicate and tender. A little too much dinner makes them yell with colic; a new tooth produces violent convulsions; and a ride in the open air would fairly snuffle them out of existence. They have become thoroughly equilibrated with a certain limited number of incident forces; and this perfection of adjustment to those narrow conditions leaves them preternaturally sensitive to every novel influence. They may be likened to a fortification in which all the labor has been concentrated upon the sea-ward side—it is impregnable against a naval attack, but wholly defenceless against an approach from the land.

Now when we desire to "harden" a delicate child, we proceed to expose him to the greatest possible variety of conditions—incident forces, as Spencer calls them. We turn him out of doors every day; we take off some of his extra wraps; we bathe him with cool water; we make him practice all kinds of games; we get him vaccinated; we let him run the risk of infection, and are glad when he has done with the measles and scarlet-fever and whooping-cough; we do not fear the changes of season, but rather welcome them as agents in the great process of building a man. If the little fellow can't stand the operation, sensible people leave to sentimentalists the task of weeping over the unhappy "victim" of exposure, and renew the experiment with the next subject which opportunity affords. It is by precisely such processes of natural selection that the earth has become peopled with just such races as now exist. When the conditions which have produced such results are anywhere suddenly modified, definite results may always be expected. If the simple mode of life of a Polynesian tribe be suddenly changed in the direction of greater complexity,

it will inevitably cause a fearful mortality from diseases against which their section of the human species has never had occasion to adjust itself. But if a portion of a highly organized race, like the Anglo-Saxon, for example, be transplanted to a region where the conditions of life are less complex, but not too far removed from those to which it has always been accustomed, the first consequence will be greater immunity from disease and a diminished mortality. This is owing to the hereditary transmission of the ancestral complexity of structure, which for a time preserves those adjustments of the organism by which it is enabled to contend successfully against adverse forces. In time, however, the universal tendency to perfect equilibrium between internal and external forces will assert itself, and the descendants of the most highly organized races, especially if shut out from intermarriage and intercourse with more favored branches of the parent stock, will sink to the level of the inferior variety.

The bearing of all this upon the course of epidemic disease in any given community is obvious. Exclude measles, for example from an island for a century or more. A race of men is produced whose physical organization has never been disturbed by the impact of the causes of measles. The consequence is a structure wholly out of equilibrium with such a force, and exceedingly sensitive to its influence. Now introduce the disease into such a community, and it will spread like wild-fire, with a terible severity and great mortality. Witness the epidemics of measles at the Faroe Islands, and at the Sandwich Islands. At length, however, the organization of the race adjusts itself to the new force; it is no longer sensitive; the epidemic "dies out" and if soon reintroduced its lack of fatality is like that observed where the disease is always endemic. We see the same thing illustrated by the course of scarlet-fever in our own communities. This is, also, the reason why the first outbreak of an epidemic, like cholera, is attended with a rate of mortality which steadily diminishes with the progress of the pestilence. These considerations, also, explain the futility of all those efforts at stamping out disease which are based simply upon non-intercourse. Disinfection and such processes as vaccination, afford the only methods which afford a reasonable hope of limiting the ravages of communicable disease.

Society Reports.

AMERICAN MEDICAL ASSOCIATION.

TWENTY-NINTH ANNUAL MEETING—HELD IN THE CITY OF BUFFALO, JUNE 4TH, 5TH, 6TH AND 7TH, 1878.

(*Reported for the* CHICAGO MEDICAL JOURNAL AND EXAMINER, *by Roswell Park, M. D., of Chicago.*)

GENERAL SESSION, TUESDAY.

The Association was called to order in St. James Hall at 11 a. m., the President, Dr. T. G. Richardson, of New Orleans, in the Chair. The stage was occupied by the other officers, and later by the Canadian delegates. Prayer was offered by the Rev. Dr. Van Bokkelen, of Buffalo. In answer to the call for the ex-Presidents, Drs. Gross, Davis, Toner, and Bowditch appeared upon the stage. Dr. Thos. F. Rochester, of Buffalo, gave the address of welcome in behalf of the committee of arrangements, offering the freedom of the college and hospitals, and the principal public institutions, declaring that the entire profession of the city had resolved itself into a committee of the whole to assist in making the visitors' stay pleasant and profitable.

Various charges against members or local societies were read and referred to the judicial council. A congratulatory cablegram from Dr. Marion Sims, now in Paris, was read. After some minor business the President delivered the annual address. Without attempting to give even a synopsis of his admirable paper, we will state that he laid particular stress upon the following points: He first alluded to the grand cause of adequate and thorough medical education, and the necessity for a more elevated standard, lamenting that, while the sentiment of the

association in times past and the measures proposed were incisive enough, the association had no power to carry them out, and they therefore remained simply as mementoes. He briefly alluded to the history of the movement, and for the first time in the public proceedings of this body, so far as the writer knows, was the Chicago Medical College credited with having taken the initiative in this matter. Being convinced that the current of reformation had taken the right direction, he felt that more must first be done to interest the great body of the profession, instead of assuming the aggressive with the medical colleges. It was from the professional public that the colleges derived their material, and it was only by awakening in these the desire for something higher and better, that the desired end could be attained.

He put in a plea for a more thorough organization of local societies and earnestly hoped that the sixty thousand physicians of this country would affiliate themselves with the Association by means of the usual means of representation.

He found much reason to regret that original investigation was not a more marked feature in the advance of scientific work in this country, especially when contrasting work done here with that done abroad, saying that a few such men as Smithson and Hopkins and Boylston and Toner, were not enough to give the universal encouragement which our home science needed. He recommended either or both of two methods to foster this spirit of original research. One was to concentrate the influence of the entire profession upon congress in order that it might take appropriate measures. In connection with this topic, the speaker referred to the magnificent collections of books and specimens and the work done by the government medical service, and thought these might be made the basis for still more work. His other plan was that the annual dues should be doubled, and the money thus turned into the treasury of the Association should be used in stimulating and rewarding really original work. He had reason to think that if the Association should become incorporated, funds would from time to time be committed to it by will or otherwise for such purposes.

The concluding portions of the address were given to a consideration of State Medicine, whose general questions he con-

sidered the most important that ever came up for discussion. He alluded to what had recently been done. Nine State boards of health had been established since the Association, in 1875, first made an appeal to the executive officers of different States. He considered the movement a grand crusade in which every one should be glad to join. He understood the objects of State Medicine to be threefold: First, prevention, by official measures, of the spread of disease not strictly limited to the individual; second, the qualification of men not only for the practice of medicine but for that of public hygiene; and, lastly, the enactment and enforcement of such laws as shall secure to all the benefit of services of the best professional experts in questions of a medico-legal character. If this statement were true how vast the field! The public were fearfully ignorant of hygienic laws, and yet Prof. Tyndall has said, "if anything is to be done in the way of really great sanitary improvement, it must be from the people themselves." But "how shall they (the public) hear without a preacher? And how shall they preach except they be sent?"

Even among the rank and file of the profession, the ignorance in these matters was deplorable. Among other remedies the proper education of the children in our schools, by inculcating the elements of a sound physiology and hygiene must stand prominent. He advocated a national council of health with members from every State, and was grateful for what had been recently done by government, in requiring frequent reports from consuls abroad as to the condition of health in their respective localities.

The address was well received by a large audience, and received frequent and merited bursts of applause.

Dr. White, of Buffalo, 1st Vice-President, who occupied the chair during its delivery, moved that a committee, to consist of the president and his four immediate predecessors in office, be appointed to consider its suggestive points and report. This was seconded by Prof. Gross, in a complimentary speech, and unanimously passed.

Dr. Brodie, of Detroit, read the report of the delegation to the Canadian Medical Association, showing perfect accord and sympathy between the two bodies.

Dr. Sayre also made a verbal report of his visit and warm reception as a delegate to the British Medical Association.

The report by Dr. Seguin, the American delegate, of the conclusions arrived at by the International Medical Congress, held at Geneva, was then read by the Secretary. The American delegates were charged "to advocate the adoption of a progressive uniformity of means of observation and record, with the concurrence, if possible of the members of this congress who should be found there, advocating the application of uniformity in this and other departments of science." For physicians and surgeons the principle accepted by the Congress is a gradual international uniformity of nomenclatures, scales, measures, calibers of instruments, of records of private and hospital practice, physiological experiments, medical clinatology, barometry, thermometry, statistics, etc.

In pharmacy the congress has accepted the conclusions voted at St. Petersburg and Brussels, to wit:

1. The adoption of an universal pharmacopœia, in Latin. 2. The metric system for weights and measures; the centigrade for temperatures. 3. A uniform nomenclature. 4. The chemical preparations to be of determined strength, and the pure drugs to be of assayed strength when possible. 5. Simplification of Galenical preparations, and description according to a uniform plan. 6. The other, and especially more powerful preparations to be made uniform. 7. Physicians to be left free and responsible for non-officinal ingredients and doses of magistral preparations.

The pharmacists now planning a new American Pharmacopœia have been notified of the above, and have been warned that they cannot succeed in founding an uniform pharmacopœia without the concourse of physicians. The report concluded by recommending a commission on uniformity in physic, with power to adjoin specialists in accessory arts, to report from the next meeting of the A. M. A. the standards and conclusions arrived at to the next International Congress, which meets at Amsterdam, three months later; and was signed by Drs. Seguin, Sims and Drysdale.

SECTION MEETINGS, TUESDAY AFTERNOON.

SECTION I. *Practical Medicine, Materia Medica, and Physiology.* Dr. A. S. Loomis, of N. Y., chairman. Dr. Shoemaker, of Pa., read a paper on "Ringworm in Public Institutions," which gave a synopsis of his experience with cause and cure of this affection, and its prevalence in public schools. Some interesting experiments, showing the exchangeability between animals and children were related.

Dr. N. S. Davis, of this city, read a paper upon the "Causes of Pulmonary Tuberculosis." He thought climatic influence was overrated, and that the real causes were lack of proper exercise and food, ill-dressing and dampness. This paper excited general discussion. Dr. Glasgow, of St. Louis, presented a rare and interesting specimen of casts of the smaller bronchi, expectorated in the course of a case of fibrinous or croupous bronchitis, with a verbal report of the same. The Doctor was requested to keep the case under observation, and report at the next meeting, with details of progress and treatment.

SECTION II. *Obstetrics and Gynæcology.*—Dr. Jenks, of Detroit, chairman. Dr. Parvin, of Indiana, read an elaborate paper on "Ovotomy," his name for Dr. Thomas' operation of Laparo-elytrotomy, already referred to and described in this journal. While admiring its ingenuity, he thought the cases would be very rare where the operation would be called for. This paper, with subsequent discussion which it elicited, consumed most of the afternoon.

SECTION III. *Surgery and Anatomy.*—Dr. Henry H. Smith, of Philadelphia, chairman. By special arrangement Dr. Howe, of Buffalo, presented a case of a plastic operation where he had transplanted a piece of integument from the forearm to the lid, with success. He thought the size of piece transplanted justified the exhibition of the case. It was about 6x4 cm.

Dr. Gay, of Buffalo, presented reports of two cases of "Excision of the Diaphysis of the Tibia," where he had removed the entire diaphysis, and where new bone had supplied the place of that removed, while both patients were to-day about on their feet as usual.

Dr. Weeks, of Portland, Me., read a paper on "Septicæmia

following Resection of Bones," founded upon a case where it followed the resection of an amputation stump. He took the ground that in septicæmia there is diminished coagulability of blood, while in pyæmia it is increased; that pyæmia never complicates a case until sufficient time for the formation of pus has elapsed, while septicæmia may take its inception within a very few hours after the injury or operation; the latter being caused by some blood changes, but not by the introduction of pus. In discussing the paper Dr. Keller, of Arkansas, said he had found in some such cases that quinine in large doses would act as a sedative and hypnotic when opium would not.

Dr. Henry H. Martin, of Boston, next detailed his method of doing "Tracheotomy without Tubes," by making the incision as is generally done, and then inserting, with a curved needle on either side, a silk or silver suture through a ring of the trachea and the integument, and thus gently stretching the lips of the wound apart, tying the threads behind the neck, and reinforcing them by strips of adhesive plaster appropriately placed to keep the opening patulous. This method required no case of instruments, and was especially suited for emergencies. By this means he had saved two out of five moribund cases operated upon.

Dr. Carpenter, of Pottsville, Pa., in a paper on the "Identity of Hospital Gangrene with Diphtheria," enumerated the following points of resemblance: Their causation, the interchangeableness of their miasm, their pathological features, their double form and course, the fact that, in both, local infection was preliminary to general, the parallel methods of cure—the same remedies being used with success in either disease, and lastly, similar modes of death and the comparative frequency of heart clot in both diseases. He said that he had met with isolated cases of hospital gangrene in the mountains of Pennsylvania.

A paper by Dr. Sayre was read in abstract, and one by Dr. Clay, of Pennsylvania, on "Peri-typhlitic abcess," by title.

Dr. Alfred Post, of New York, read a paper on "Plastic Surgery," giving reports of cases, and Dr. Moore, of Rochester, described a very ingenious new method of operating antiseptically by utilizing the known properties of carbonic acid gas, simply

directing a stream of it upon the parts, or immersing them, as it were, in a stratum of the gas.

SECTION IV. *Medical Jurisprudence, Chemistry and Psychology.*—Dr. Kempster, of Wisconsin, Chairman. This section was not organized till the next day.

SECTION V. *State Medicine and Public Hygiene.*—Dr. Cabell, of the University of Virginia, Chairman. Ex-President Bowditch detailed his patient and laborious "Studies of an epidemic of diphtheria" in Vermont in 1877. He described the locality and traced the epidemic with great care. At its conclusion, he moved its reference to a committee of experts. It was finally, after discussion, referred to the committee of publication.

One of the features of the meeting was a paper by Dr. Seguin, of New York, on the "Intervention of physicians in education." It excited great interest, and is worthy of introduction here in full, did space permit it. He started with the thesis which he had formerly insisted upon, that "new social and individual wants demand new solutions of the problem of education, and most of these expected solutions rest with the physician and the physiologist." The physician's labors should begin, 1st, during vacation. He should then attend to cleanliness, drainage, ventilation, lights, etc., see that the books and charts were suited to the range of vision, the desks to the size of the scholars, and the seats to the diversity of shapes, especially among the girls. 2d. Before school begins, he should thoroughly examine every scholar, recording accurately his results, as to anomalies of size, proportion, vision, or other senses, etc., and decide whether any departure from the ordinary curriculum is called for in individual cases. 3d. He alluded to the increasing prevalence of myopia of school origin, and to the predisposition to hemiplegia later in life, which the habit of working one hand or one side of the body more than the other would cause. 4th. The doctor should make a daily round of the school to guard against the introduction of zymotic or contagious disease, regulate the temperature, discover simulated or dissimulated disease, and to note the effect of courses of studies upon children and any intellectual perturbations. 5th. The physician must interfere in education as soon as the effects of overwork are perceived. 6th. He should create and organize

the physiological training and sharpening of the senses and of the hand, taste should be developed and manual dexterity encouraged. 7th. All this time he must keep this record of vital powers, and finally add a summary of the students' physiological powers of perception, action and endurance. In a word, the teachers' certificate should tell what the scholar knows, and the physician's what he can learn. The Doctor concluded by saying that the true riches of this country would be its children, if properly educated.

The paper was emphatically endorsed by those present, and Dr. Frank Hamilton was requested to give a summary of the paper and his own experience in the matter at the meeting in general session the next morning.

WEDNESDAY MORNING—GENERAL SESSION.

The Association was called to order by the President at 9:30 sharp. After election of members by invitation, and reading of letters from Dr. Battey, of Georgia, and Dr. Vaughan, of Mississippi, regretting their inability to attend, the reports of the Judicial Council were called for. None of the charges against members were sustained. It was decided that the local societies of Hot Springs and Garland county, Arkansas, on account of their severance from their State society, should lose their recognition by the association. The report was signed by the Secretary of the council, Dr. Benham.

Dr. N. S. Davis made a special report for the council concerning the charges against the Michigan State Society. The charge was an alleged violation of the code of ethics in electing as a delegate, Prof. E. L. Dunster, of Ann Arbor, knowing him to be engaged in aiding and abetting the graduation of students devoted to an exclusive dogma in practice. The reporter said that careful scrutiny failed to show any clause of the code that referred, even remotely, to the practice that constituted the basis of the above charge. The only clause that could be so considered was that referring to consultation at the bedside. To interpret the conduct of Dr. Dunster as having ignored this clause, would be not only to violate all principles of judicial construction, but would establish a precedent in latitudinous construction of the code, more

dangerous to the best interests of the profession than all the evils sought to be remedied. While the council deprecated such aiding and abetting in teaching and graduating students in singular and exclusive dogmas as beneath the dignity of right-minded men in a liberal profession, they found no clause in code, by-laws or constitution, under which the charge could be entertained and adjudicated.

During the excited discussion which this special report provoked, the presiding officer displayed the same familiarity with parliamentary rules which marked his administration during the other sessions. Pending further action, Dr. H. H. Smith delivered his address, as Chairman of Section III.

He took for his subject, "Certain Points in the Pathology of Bone, especially Tubercle." Alluding to the old opinion that the skeleton was simply intended as a support, he went on to say that more recently a new function had been assigned it, the interior of bones being now regarded as a focus of origin of the red and white blood corpuscles, while by the same means septic matter was often introduced into the general circulation. He considered the physiology of red and yellow marrow, and mentioned that the coloring matter of yellow marrow, the corpora lutea, of yolks of eggs, and of ordinary fat, was identical. He quoted most recent investigations by various observers. The lymphatic structures of bone were briefly described, and its great vascularity at greater length. He alluded to the fact that nowhere in bone were the vessels separated by more than the 1-130th of an inch. Realizing these facts, one could readily understand the liability to inflammation and inflammatory changes, especially the formation or "deposition" of tubercle. The speaker mentioned several cases in his own experience where severe osteo-myelitis had followed exposure, without injury or any extension of periosteal inflammation, and said that similar results followed oftener than was generally supposed. One origin of septicæmia could thus be traced; and to prevent this very result he urged the trephining of bones when osteo-myelitis had set in, to give free exit to pus. He mentioned illustrative cases, and said that now no *post-mortem* was complete without a careful examination of the bones.

He referred then at greater length to tubercular changes in bone, and insisted that hip-joint disease, Potts' disease, and similar maladies were much more frequently the result of such change than of injury. He laid great stress upon this matter, and the remainder of his address was devoted to elaborating it and combatting the contrary opinion.

With respect to tubercle his conclusions were:

1. That it was intimately connected with the lymphatics and was deposited in them and in the spongy texture of epiphyses and short bones.

2. That when thus deposited it developed just as when in other situations.

3. That it affected the vessels and cancellated structure rather than the ligaments and cartilages.

4. That the destruction of ligament and cartilage was the effect rather than the cause of impaired nutrition.

5. That softening tubercle caused congestion and inflammation of bone-cells about the deposit.

6. That perverted myeloid cell-action was consequent upon such change, and reacted by modifying the formation of blood corpuscles.

7. That so-called scrofulous disease of bone was essentially perverted myeloid cell action.

The address was received with great interest and was one of the features of the meeting.

Following it, Dr. Hamilton read a synopsis of Dr. Seguin's paper, as requested by the Section of State Medicine, and related in a characteristic way some of the experiences of a few New York City physicians who endeavored, but without success, to have one respectable practitioner appointed upon their city Board of Education. From what he said the writer could but conclude that it was the same old story which Chicagoans have so often heard; that prostituted political influence is supreme where it ought not to be tolerated.

At the conclusion of his remarks the Association unanimously adopted the following resolution:

That in the opinion of this Association medical men ought to have a voice in the construction and location of public school

buildings; in the question as to the age at which children should be admitted, the hours of study, and the general management of these institutions; and to this end it is believed to be necessary that one or more intelligent physicians should be placed upon Boards of Education, Boards of Trustees, and upon other similar boards having the control of public education and schools.

Dr. E. W. Jenks, of Detroit, chairman of the Section on Obstetrics and Diseases of Women and Children, then delivered an extended and very able address on "The Causes of Sudden Death of Puerperal Women." Among these causes he particularly mentioned:

1. Lesions of the Circulatory System; especially mitral stenosis, endocarditis, fatty heart, arteritis, phlebitis, thrombosis, embolism, etc.
2. Lesions of the Respiratory System.
3. Lesions of the Nervous System; eclampsia, tetanus, apoplexy, shock, etc.
4. Puerperal Septicæmia.
5. Various other causes, as rupture of uterus, emotion, hæmorrhage, traumatism, etc.

The reading of this address also elicited marked attention.

A recess was then taken to permit the delegates to select the Committee on Nominations.

When called to order again, in reference to the matter of deficiency of the code of ethics, already alluded to in this morning's work, the following preamble and resolution, offered by Dr. J. R. Bronson, of Massachusetts, were referred to the members of the Judicial Council as a committee:

Whereas, By the report of the Judicial Council, submitted this day, we are informed that the ethical code of this Association is imperfect, in that it does not recognize by its letter a conceded violation of the spirit of our profession in its relation to irregular medicine; therefore,

Resolved, That said Council be instructed to submit to this Association at their meeting, for its consideration, an amendment to the code covering this omission.

A resolution offered by Dr. Foster Pratt, of Kalamazoo, Mich.,

in relation to the legal status of the insane, was referred to the section on medical jurisprudence.

This closed the morning session.

AFTERNOON — SECTION WORK.

SECTION I. The first paper was one by Dr. G. M. Beard, of New York, upon "Practical Points in the Electrical Treatment of Impotence," which was well received and discussed.

Next was an important paper on "The Neuroses of the Pneumogastric and Sympathetic," by Dr. J. J. Caldwell, of Baltimore. It was discussed by Dr. Palmer, who endorsed the theory presented.

A paper on "The Metric System in Medicine," by Dr. Edward Wigglesworth, of Massachusetts, was read. The system, he stated, has been recommended for use throughout the United States by the State medical societies of both New York and Pennsylvania.

A paper by Dr. Bulkley, of New York, "On the Use of the Solid Rubber Bandage in Treatment of Eczema and Ulcers of the Legs," was read by title, the author being absent.

SECTION II. The first paper was by Dr. Reamy, of Ohio, entitled, "Hour-glass Contraction of the Uterus, Prior to Expulsion of Child, with Case." This was a report of such a case, with inferences and practical deductions. In discussing it Dr. Dunster said he had once seen such a case, where he could see underneath the abdominal walls the longitudinal fibers, only, contracting; he explained such phenomena on the ground of separate innervation of the different sets of fibers.

Dr. Stover, of Rhode Island, then read a paper on "The Frequently Gynæcological Origin of Inherited Forms of Strumous Disease, and the Consequent Indications for Treatment," The section was shown a number of new instruments and appliances.

SECTION III. Dr. H. H. Smith then gave a demonstration, from a number of moist and dry preparations, of points referred to in his address delivered that morning. Time being granted for discussion, Dr. Gouley, of New York, objected to the use of the term "*deposition* of tubercle." He thought we did not know much about tubercle, but that, inasmuch as we are coming to re-

gard it as a hypertrophy or hyperplasia of normal elements, the term "deposition" was incorrect; that the term "metamorphosis," if we must have such an one, would be preferable.

Dr. Sayre rose to combat the idea that hip-joint disease was largely of tubercular origin. He reported a case, which he had seen in England, of traumatic origin, where the family pedigree, as traced back for several generations, was exceptionally healthy. He alluded facetiously to the fact that in this country we kept with scrupulous care the pedigrees of our horses and cattle, but that it was very difficult to get a clear family history two generations back.

Dr. Julius F. Miner, of Buffalo, took the floor and read a paper entitled, "The Extirpation of the Thyroid Gland," illustrating the same with several specimens, which were passed around upon plates. He quoted the discouragement of the operation made by various authors, expressed the opinion that this denunciation was unwarranted, and exhibiting three specimen growths recently removed, gave their history, and the condition and experience of the patients from whom they were taken. In conclusion, Prof. Miner held that if all other means fail, some goitrous tumors may be extirpated with the knife, with reasonable hope of success.

He was asked by Dr. Sayre whether the vessels were ligated before or after division, and Dr. Miner replied that most of the blood vessels were ligated immediately after the division. Only one was generally ligated before division. Dr. Sayre then made some remarks upon the subject. He also discussed the subject demonstrated by Dr. Smith.

Dr. B. A. Watson, of Jersey City, then interested those present with an exhaustive and carefully prepared paper upon the subject, "Disease Germs; their Origin, Nature and Relation to Wounds." The conclusions drawn by Dr. Watson were:

First. That there are certain germs in the air, more particularly in the atmosphere of overcrowded hospitals, which, if permitted to enter wounds, give rise directly to living organisms, and indirectly to all septic conditions which are found as wound complications.

Second. That the successful management of wounds depends principally on the ability of the surgeon to keep the wounds under

all circumstances and at all times free from germs and living organisms; and therefore the value of any method of wound treatment depends primarily on the degree of antisepsis which can be obtained by it.

Third. That the occasional discovery of a few bacteriæ in a wound, which has been treated antiseptically, does not disprove the fact that these bacteriæ arise from germs; but may be satisfactorily explained in a variety of ways, especially by the existence of germs which have not been destroyed by the means employed.

The next paper was by Dr. Hyde, of Courtland, N. Y., whose subject was "The Process of Repair in Wounds with and without Antiseptic Treatment." Dr. Hyde endorsed the use of the antiseptic treatment so far as it proved itself, though he did not regard it as being fully established at the present time. As to what treatment should be adopted, he said: "First it should aim to protect the purity of the primary exudation, that it may become as soon as possible fibro-cellular-tissue; and maintain its just relations to the sundered, injured textures, that its advancing development may not be hindered, but on the contrary, made as summary as possible.

Dr. Burns, of Philadelphia, read a brief paper on "Conservative Surgery in Compound Fractures," which embraced the history of a case which constituted, in his opinion, an entirely satisfactory example of the good results of conservative surgery under unpromising circumstances.

The Secretary read a communication from Dr. Robert Battey, of Rome, Ga., expressing regret at his inability to attend the convention.

On motion, Dr. Battey's paper on "The Permeability of the entire Alimentary Canal by Enemata, with some of its Surgical Applications," was read by title and referred to the appropriate committee.

Dr. Blodgett, of Boston, read a paper giving the history of a case of "carcinoma," with some remarks on the pathology of the disease.

Lastly, Dr. Post read a history on exsection of the articular

extremities of the phalanges of the fingers and toes for the relief of deformity of those members.

SECTION IV. Transacted its first business.

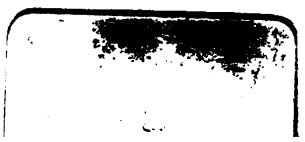
Dr. Kempster read an interesting and lengthy paper on the "General Paresis of the Insane." The paper was discussed by several of the gentlemen present. Dr. Compton stated that he never saw a case of paresis among the large number of negro insane patients which he has had under his charge.

After some desultory discussion on the resolutions referred by the convention, the section adjourned.

SECTION V. The first paper read was by Dr. T. M. Stevens, of Indiana. It was composed of answers to a series of questions addressed by the Chairman of the section in a circular. In the course of his paper he made the following statements:

"A very large proportion of diseases in Indiana is due to defective drainage. It is impossible to say what the per cent. is; all forms of malarial fever are prevalent here, and as is well known they have bad drainage as a cause, even if the theory of miasm is abandoned and that of oscillation of temperature substituted; the damp moist grounds are the homes of those forms of maladies. In Indiana we might say that two kinds of general ailments are in a greater or less degree connected with so-called malaria. One form of consumption is no doubt often due to insufficient drainage. The moist and chilly air that is inseparable to locations where the surface ground is soaked with water, is favorable to the production of one form of consumption, also some forms of catarrhal affection, pneumonia and intestinal disorder; this fact is too well known to be disputed. As to diphtheria and true typhoid fever, as we think they depend upon a specific 'germ,' or some 'vital contagion,' we do not believe that moisture in the ground or elsewhere will cause them, but it may and no doubt does act deleteriously upon the system, and often places it in a condition that invites the 'specific germ' to 'such a habitat'—as for the typhoid fever, so prevalent in certain localities and seasons in Indiana; we believe that some forms of so-called typho-malarial fever often receive the more of the specific form, so nearly in many respects do they resemble each other. * * *

"The fact must be remembered that the ground may have too



much water upon it to develop malaria, and if this be drained off intermittents, etc., will appear, but if drainage is continued, and the surface soil be depleted of its water of saturation, then they will disappear again. This chain of events often throws drainage into discredit; far better is it to flood the marsh than not thoroughly to remove the water of saturation."

With regard to the influence of rain-fall and drought on the purity of the water supply, he says: "There is no doubt that where there is an impervious clay soil, and in some degree with any soil, rains, somewhat in proportion to their extent and the quantity of water precipitated, contaminate the water supply as we have it here, viz., from rivers and wells, the filth and debris being washed into these at each rain—not only this, but the first stream of water is more or less impregnated with the filth, for say what we will, earth or sand is by no means a perfect filter. The country towns and cities are full of wells dug to the first stream, so that the inhabitants suffer from a double sense, viz.: the washing into each well, and impurities that find their way to the stream from which such wells derive their supply of water.

"Drought has of course only a negative effect upon the purity of water; when there is no rain to wash or percolate, such impurities are in a degree absent."

Concerning the spread of contagious disease by water contamination, he queries:

"Does the water ever usurp the place of air as a carrier of the exanthemata? Can the poison of diphtheria ever find its way into the body of another in this way? Such questions are to be answered by the sanitarian of the future. * * As the majority of the inhabitants of the country, as well as of cities, are dependent upon either wells or cisterns for their supply, if a large percentage of such are but the reservoirs for the most impure waters, it is important that knowledge of the dangers should be disseminated. But there should be a remedy suggested for every evil shown to exist, and we think there is one for the troubles we have mentioned, as efficacious as it is simple. There is no new principle involved, for it is merely a filter, nor is it new in application in this form, but it is not fully adapted, nor is its complete success acknowledged. The material to be used is

'front' or soft brick. With these a vaulted chamber is formed, resting upon the bottom of the cistern. This chamber may be from two to six barrels in capacity. The vault is arched at the top, similar in form to an old-fashioned 'bee-hive.'

"The bricks are laid in cement, but none is applied to the surface; the water flowing into the cistern filters through the soft brick into the vault, and by this means is rendered clear and sweet. The pipes from the pump enter this filter, the point of entrance being rendered tight by cement.

"Water will continually fill the vaulted chamber; each stroke of the pump partially exhausting it, will facilitate the flow, so that there is, at all times, a sufficient supply within the filter. Since we resorted to the expedient mentioned we have had no trouble whatever. * * Until some mode of filtering their water supply is adopted, the inhabitants of cities that are supplied by river water by means of water-works, know not what they drink, and may at any time suffer from the effect of impurities taken into their systems. We consider this mode of filtering water as capable of almost universal application, and it is for this reason we have spoken so fully concerning it."

Dr. Trader, of Sedalia, Mo., in his answer to the same circular, read next, made the following points:

"Notable are the epidemics of dysentery that have at several seasons since 1866, made their appearance in the vicinity of Sedalia and Georgetown. It cannot certainly be known whether the contamination was subterraneous or surface, or both combined. The springs, in the locality named, besides containing lead and antimony, may also have decayed animal and vegetable matter in solution, and it is quite probable that the latter two have a more deleterious influence to health than the former. Many families during our epidemic of dysentery, who used cistern waters, were seriously affected, especially those who had taken no precaution against contamination. Properly filtered cistern water seems so entirely free from any deleterious substances that those families using such water were comparatively exempt from the epidemic. * * Damp and overflowing cellars are, apparently, as prolific in the production of malarial disorder as are the bottom lands of our creeks and rivers. * *

In every case where cellars have been properly drained and dried, the betterment of the household was at once apparent."

The views of Dr. Carrigan, from Hempstead Co., Ark., may be gleaned from the following extracts from his reply:

"Our bowel affections, pneumonias, catarrhal affections and diphtheria, we regard as being dependent upon malaria. Consumption and typhoid fever we seldom if ever have as original complaints.

"In our prairies the soft lime rock underlies the soil at various depths. This lime rock is composed of 85 per cent. of carbonate of lime, which, of course, makes the water hard. In our sandy and timbered lands we usually get water in ferruginous clay or quicksand. In the prairies the depth of four or five hundred feet is frequently reached before getting water. In the timbered portions the wells will average about 30 feet. In the southern part of the State we have few springs. Nearly all the people use well water, which is usually freestone, clear and pleasant-tasted. Beyond doubt, from soil saturation, and from the timber curbing—which nearly all the country people use—we can account for the malarial diseases that we encounter in the high and well-drained portions of our country and in no other way.

A dry season is always a healthy season; out of the reach of our swamps.

To show that the water in our swamps is contaminated by vegetable decay, I would state that the people who use cistern water have better health than those who use well water.

After the conclusion of this subject Dr. Jacobi, of New York, addressed the meeting in further reply to the paper read Tuesday afternoon, by Dr. Bowditch, of Boston, on the contagiousness of membranous croup and diphtheria.

Dr. Wilcox, of Hartford, Conn., asked Dr. Jacobi the cause of diptheritic diseases, and Dr. Jacobi said he could answer the question very easily by saying he did not know, but spoke about many cases and causes in his practice.

Dr. Abbott, of Hamburg, N. Y., spoke of an interesting case, where cutaneous diphtheria followed piercing of the ears, and the patient died. In less than six weeks afterward, there were fully six cases in the village, which indicated contagion.

Dr. Jacobi spoke of a case of a man who scratched a little pimple, and it was followed by erysipelas and meningitis causing death in four days afterward. He believed in a specific poison, but was not certain whether it was chemical or parasitic.

Dr. R. J. O'Sullivan, of New York, spoke of the diseases among the children in the public schools in New York. He said that within the past ten days a lady teacher had dropped dead while at her duty, and another, not being allowed to go home when ill, died three days afterward from the effects of nervous diseases incident to the imperfect health precautions in the public schools, where so many children are packed together.

Dr. Bell, of New York, then offered the following resolution, which was adopted:

Resolved, That Dr. E. Seguin's paper on the "Intervention of Physicians in Education" be recommended for publication in the transactions, and that Drs. F. H Hamilton, E. Seguin, R. J. O'Sullivan, of New York; Dr. D. B. Lincoln, of Boston; Dr. W. H. Van Bibbon, of Baltimore, be appointed a committee to report to the Association at its next meeting upon the practical suggestions of the said paper.

Dr. Billings, U. S. A., then exhibited the designs of the Johns Hopkins Hospital to be erected at Baltimore, and explained the improved methods of ventilation, system of caring for the sick in the ward rooms, dining room and all parts of the buildings, also the system of draining under and about the hospital, which were attentively listened to.

Dr. Jones, of Toledo, moved that Dr. Billings of the United States Army prepare a paper on the construction of hospitals, to be read at the next annual meeting of the Association, which was carried.

Papers by several absentees were read by title and referred to the Committee on Publication.

Thursday Morning—General Session.

After the transaction of some routine and minor business, the following resolution was offered by Dr. A. N. Bell, of Garden City, and was laid over under the rules until next year:

Resolved, That Section IV., on Medical Jurisprudence and

Psychology, and Section V., on State Medicine and Public Hygiene, be consolidated into one section as Section IV.

Dr. N. S. Davis, Chairman of the Judicial Council, to which was referred the previous morning the matter of an amendment to the code of ethics, then reported the following:

"In obedience to the instructions of this Association, the Judicial Council, acting in the capacity of a committee, have unanimously instructed me to report to your honorable body the following amendment and addition to Paragraph 1, Article 1, of the second division of the code of ethics, under the general heading, "Of the duties of physicians to each other, and to the profession at large," and the special heading, "Duties for the support of professional characters." The same when finally adopted to be added at the end and to constitute a part of said Paragraph 1, of Article 1. The proposed addition is in these words: "and hence it is considered derogatory to the interests of the public and the honor of the profession for any physician or teacher to aid, in any way, the medical teaching or graduation of persons knowing them to be supporters and intended practitioners of some irregular and exclusive system of medicine."

It was ordered that under the rules the proposed amendment would have to be laid upon the table until the next annual meeting.

Dr. J. M. Toner, of Washington, D. C., Chairman of the Committee on Necrology, presented his annual report. It was a very voluminous document, containing sketches of seventy-five physicians who had died during the past year, and owing to its great length was not read but referred at once to the Committee on Publication.

The report of Dr. H. C. Wood, Chairman of Committee on Catalogue of National Library, being absent, his report asking for extension of time was read by the Secretary, and on his motion the request granted.

Next came the address by Dr. A. L. Loomis, chairman of Section I. He first gave a brief résume of recent advances in materia medica and physiology, making special mention of jaborandi. He then passed to the consideration of the different forms of phthisis, and especially their climatic treatment. He

alluded first to the anatomical changes which occur in lung tissue in this disease, and to the pathology of the three forms, catarrhal, fibrous and tubercular.

In one class of cases the primary changes are in the cavities of the alveoli and bronchi, and are epithelial and cellular in their nature. This class would include catarrhal phthisis.

In another class of cases, the primary changes occur in the bronchial and alveolar connective tissue, and are connective tissue hyperplasias. This constitutes the variety known as fibrous.

Again, in another class of cases, the primary changes occur in the lymphoid elements of the lung, in which hyperplasia of the lymphoid elements associated with connective tissue hyperplasia form little masses or nodules, which are ordinarily termed tubercle. This class he would include under the head of *Tubercular Phthisis.* These different anatomical changes in the lungs differ so widely and give rise to such varying phenomena in the course of their development, that in order properly to estimate the value of remedial agents, the power of hygienic surroundings, and of climate to prevent or arrest their development, there must be a careful analysis of our cases, that we may determine the variety and stage of development of each case which comes under our observation.

In tubercular phthisis he had never known climate to produce favorable results, while in the other two varieties it has shown marked power in arresting and controlling the disease. There could be but little question that there were atmospheric germs which, when drawn into the lungs on inhalation, act in a chemico-local manner. They act not only upon the surface of the mucous membranes, but originate destructive processes in the lung parenchyma.

Fifteen years ago the belief prevailed that the essential climatic element for the arrest or cure of phthisis was a warm, dry atmosphere. More recent observations and investigations have settled the fact that phthisis is not necessarily hastened in its development by a low temperature, neither is it prevented or cured by a high temperature. As yet, no one has found the ideal climate for the phthisical invalid. Again, it has been claimed that the higher the altitude, the fewer were the cases of

phthisis, until at a certain elevation it entirely disappeared, and that this diminution in the number of cases was due to diminished atmospheric pressure. More extended observation has demonstrated that the altitude at which this supposed immunity exists, varies with the latitude; that the nearer the approach to the equator, the higher must be the altitude in order to accomplish the desired result. This fact seems to prove that the development of phthisis does not depend upon atmospheric pressure, for the laws which govern atmospheric pressure are ever the same at a given altitude.

Dr. Schreider, in his lectures on Climatology, states that ozone and rain have the power of purifying the atmosphere, that is freeing it from organic substances, that the purifying power of ozone depends upon its oxydizing power, that while oxygen requires a considerable degree of heat before it will combine with other substances, ozone will do so at an ordinary temperature.

Ozone destroys the products of decomposition by chemically combining with them. The presence of ozone in the atmosphere is presumptive evidence that it contains no organic substances. The air of the ocean and high mountains is richer in ozone than that of the plains. As has been already said, ozone purifies the air of a locality by destroying injurious gases, and by oxydizing decomposing organic substances. It also promotes nutrition and blood changes by supplying to the respiratory organs a most active form of oxygen. Therefore, when choosing a health resort for phthisical invalids, we should give the preference to a locality in which there is constantly an excess of ozone in the atmosphere, for experience has established the fact that there the climate is especially salubrious. For some years pulmonary invalids have been recommended to take up their abode in the midst of pine forests. It has been known that they did well amid such surroundings, but "why they did well" has been an unanswered question. The more extensive and primitive the evergreen forests, the better adapted is the climate to phthisical invalids. The turpentine exhaled from these pine or hemlock forests possesses to a greater degree than any other known substance, the power of converting the oxygen of the atmosphere into ozone, thus rendering the air of these pine forests very pure, and consequently

antagonistic to phthisical development. Experiment has shown that the direct inhalation of ozone has little if any power in preventing or arresting phthisical development. We must, therefore, conclude that it is not the action of the ozone upon the respiratory surfaces that renders the climate of localities where it is found in excess especially salubrious, but that by its power of destroying noxious gases and atmospheric germs the atmosphere is rendered so pure that its action is favorable upon the respiratory surfaces of those predisposed to phthisical development.

Temperature has always been regarded as of very great importance in the climatic treatment of phthisis. For a long time a warm sedative climate was regarded as the suitable one for phthisical invalids; more recently, it has been claimed that a cold climate is the favorable one, and that phthisical mortality decreases as we go northward.

An extended clinical experience will lead one to accept both views as correct to some extent.

It is not the mean temperature of a locality which is of such importance in retarding phthisical development, but it is the absence of sudden and frequent changes. Whether a cold or warm climate is indicated in any given case, can be determined only by the experience of the individual prior to the phthisical development.

The question naturally arises, is it possible to determine without a trial of the region, who shall go to the sea and who shall go the mountains. The experiments of Prof. Beneke seem to prove that tissue changes take place more rapidly on or by the sea than in the mountains; if this is the case we may readily arrive at the following conclusions: 1st. That individuals in whom the processes of tissue change do not require hastening are better in the mountains than on, or by, the sea. 2d. Persons past middle life, in whom phthisis has been developed, do better in sea than in mountain air. 3d. Phthisical invalids should not go to the mountains unless they are capable of considerable muscular activity. 4th. As a rule, phthisical individuals with an exhausted nervous system, with an overtaxed brain from excessive mental labor, or an all-absorbing occupation, yet who still retain considerable latent muscular power, will improve in the mountains,

while those whose processes of tissue change require hastening or stimulating, they being in too feeble a condition to take active muscular exercise, should go to sea.

Sea air is better suited than mountain air to those who cannot bear sudden changes of temperature; while the susceptibility to such changes is greatly lessened by mountain air.

The writer's experience had led him to the following conclusions:

First—That we can expect permanent improvement in cases of developed phthisis only after a prolonged residence in the locality which experience has proved to be best suited to each individual case. Permanent favorable results cannot be obtained from an annual change of climate.

Second—That cases of *tubercular* phthisis in any stage of the disease, grow steadily and rapidly worse in all localities. Such cases do best in the quiet, well ventilated apartments of their own homes, where they can be surrounded by all those influences and circumstances which tend to make a feeble invalid comfortable.

Third. That cases of *fibrous* phthisis in every stage, whether the fibrous process commenced in the pleura or in the bronchial tubes, even after retraction of the chest walls, especially in the infra-clavicular region, is well marked, and the bronchial dilatations which accompany it, give the physical signs of extensive cavities, improve, and often reach a condition of comparative health, when they take up their residence in regions having very high altitude, such as are found in Colorado and in the Rocky Mountain range. The benefit which asthmatic and emphysematous invalids derive in these regions is most marked.

He had seen only a very limited number of cases of catarrhal phthisis permanently improved by long sea voyages or a residence in a warm climate. A large number in the early stage of this disease, going from a northern to a southern winter are temporarily improved; after the first apparently beneficial effects are passed, the degenerative inflammatory processes go on more rapidly than before.

The invalids whom he had found to be most markedly benefited by a sojourn during the winter months in a southern climate, were those convalescing from some acute pulmonary affection, in

whom the delayed convalescence raises the fear of possible phthisical development, and those in whom acquired or hereditary phthisical tendencies exist, yet there may be no positive physical signs of disease of the lungs. The list of such cases is a long one, and the results obtained are most satisfactory. His favorite resorts for such cases are Aiken in South Carolina, Palatka, Enterprise and Gainsville in Florida, and Thomasville in Georgia. His best results in the stage of consolidation of the catarrhal form of phthisis have been reached in those who have made a prolonged stay (varying from one year to three years) in mountain regions with an elevation of from 1,500 to 2,000 feet. Of such regions the most positive and permanent beneficial results have been obtained in Ashville, N. C., and in the Adirondack region in New York.

His address concluded with the following practical suggestions:

"It seems to me that the necessities of our time are demanding the establishment not only of well organized and thoroughly equipped sanatariums by the sea, in the mountains, in the cold regions of the North, and in the warm regions of the South, but that our mineral springs should be utilized for the care of disease. No one doubts but they are equal if not superior to those of the old world; yet to-day we know more of the virtues of Karlsbad, Kissengen, Vichy, and Hunyadi waters, than those of Saratoga, Virginia, Arkansas, and Colorado. Has not the time come, gentlemen, when some organized action should be taken in this matter?"

Dr. White, of Buffalo, spoke in highest terms of the address,—of which a long abstract has been given on account of general interest in the subject, and then alluding to the general ignorance on the subject of ozone, offered the following resolution, which was carried:

Resolved, That the President appoint a committee of five members to confer with General Myers upon the subject of making observations as to the existence of ozone in various localities and take such other steps and measures in the matter as may be necessary for the success of the object.

The Committee on Nomination submitted the following list of nominees for various positions:

President—Theophilus Parvin, M. D., of Indiana.

Vice-Presidents—A. J. Fuller, M. D., Maine; W. F. Westmoreland, M. D., Georgia; John Morris, M. D., Maryland; John H. Murphy, M. D., Minnesota.

Treasurer—Richard J. Dunglison, M. D., Pennsylvania.

Librarian—William Lee, M. D., District of Columbia.

Committee on Library—Johnson Eliot, M. D., District of Columbia.

Next Place of Meeting—Atlanta, Ga.

Time of Meeting—First Tuesday in May, 1879.

Assistant Secretary—Scott Todd, M. D., Atlanta, Ga.

Committee of Arrangements—J. P. Logan, Chairman; H. V. M. Miller, G. G. Crawford, H. L. Wilson, J. F. Alexander, J. M. Johnson, Charles Pinckney, V. H. Talliaferro, J. T. Johnson, all of Atlanta, Ga.

Committee on Prize Essays—Robert Battey, Rome, Ga.; J. G. Westmoreland, Atlanta, Ga.; Wm. A. Love, Atlanta, Ga.; Robert Ridley, Atlanta, Ga.; Henry F. Campbell, Augusta, Ga.; J. H. Van Deman, Chattanooga, Tenn.

Committee on Publication—Dr. Wm. B. Atkinson, Chairman; Drs. T. M. Drysdale, A. Fricke, S. D. Gross, C. Wister, R. J. Dunglison, of Pennsylvania, and Wm. Lee, District of Columbia.

Judicial Council—To fill a vacancy caused by death, John P. Gray, Utica, New York.

In place of the seven whose terms expire at this meeting—D. A. Linthicum, Arkansas; Foster Pratt, Michigan; A. Woodward, Connecticut; J. M. Toner, District of Columbia; J. H. Van Deman, Tennessee; S. N. Benham, Pennsylvania; R. N. Todd, Indiana.

The committee also reported the following nominations for Chairmen and Secretaries of sections for 1879:

Section I, Practice of Medicine, Materia Medica and Physiology—Dr. Thomas F. Rochester, Buffalo, N. Y., Chairman; W. C. Glasgow, St. Louis, Mo., Secretary.

Section II, Obstetrics and Diseases of Women and Children—

E. S. Lewis, New Orleans, Chairman; J. R. Chadwick, Boston, Mass., Secretary.

Section III, Surgery and Anatomy—Moses Gunn, Illinois, Chairman; Dr. J. R. Weist, Indiana, Secretary.

Section IV, Medical Jurisprudence, Chemistry and Psychology —Dr. William M. Compton, Mississippi, Chairman; L. M. Eastman, Maryland, Secretary.

Section V, State Medicine and Public Hygiene—Dr. John S. Billings, District of Columbia, Chairman; Dr. J. T. Reeve, Wisconsin, Secretary.

The above report was unanimously adopted.

A report, signed by Drs. Davis and Gross, concerning the recommendations in the annual address of President Bowditch, at the Chicago meeting, last year, was read by the former. It was deemed inadvisable by the committee to attempt to make the alterations in the working programme of the Association recommended by Dr. Bowditch, in that they tend to complicate rather than to simplify matters. They recommended simply the striking out of the paragraph in Section 11, of the by-laws, commencing with "Papers appropriate to the several Sections," etc., and inserting in its place the following:

"It shall be the duty of every member of the Association who proposes to present a paper or report to any one of the Sections, to either forward the paper, or a title indicative of its contents and its length, to the Chairman of the Committee of Arrangements, at least one month before the annual meeting at which the paper or report is to be read. It shall also be the duty of the President and Secretary of each Section, to communicate the same information to the Chairman of the Committee of Arrangements concerning such papers and reports as may come into their possession or knowledge for their respective Sections, the same length of time before the annual meeting. And the Committee of Arrangements shall determine the order of reading or presentation of all such papers, and announce the same in the form of a programme for the use of all members attending the annual meeting. Such programmes shall also contain the rules specified in the by-laws and ordinances concerning the consideration and disposal of all papers in the Sections."

Dr. Bowditch himself, of the same committee, submitted a minority report, maintaining his own position, at the same time admitting the cogency of argument of the majority report, and gracefully acquiescing in their judgment.

The majority report was adopted.

Next in order was the address of Dr. J. L. Cabell, Chairman of Section V. Devoting the entire address to matters pertaining directly to his Section, he gave a digest of what was doing in our own country and abroad. Considering first public hygiene, he said that the evidence of an advance in this direction with reference to the maintenance of the purity of the air within and around dwellings, consists not so much in the discovery of new facts or principles, as in more careful, exact and honest methods of sanitary engineering, in conformity with well-known laws of sanitary science. He alluded to the necessity for proper drainage and the proper action of the soil and consequent oxydation of organic matter by this means. He thought that in cities, the asphalt pavement would best preserve the atmosphere from contamination. He told how Dr. Frankland had recently investigated the conditions under which organic germs pass from sewage into air, and by means of decisive experiments had demonstrated the fact that the breaking up of minute gas bubbles resulting from fermentation or putrefaction is a cause of the suspension of solid organic particles in the air. If therefore, through the stagnation of sewage, or constructive defects which allow the retention of excrementitious matters for several days in a sewer, putrefaction sets in, then gases are generated, and the dispersion into the air of zymotic germs is very probable. It is, therefore, of the greatest importance that foul liquids should pass rapidly and freely through drainage pipes and sewers, so as to secure their discharge before putrefaction sets in.

The deleterious influence of cemeteries and sewerage in the neighborhood of a source of water supply, received due mention, as well as humidity of the soil, as a factor in the etiology of phthisis. He also alluded to the growing necessity for legislation concerning the pollution of rivers by sewage.

Taking up next the prevention and spread of contagious diseases, he spoke of the almost insuperable difficulties to be overcome

in the accomplishment of the work. The epidemic character of some and the cyclical periods of others, could be seen better than they could be guarded against.

He also considered as suggestive and instructive the curious fact that those epidemics which chiefly affect certain organs of the body, are most common at the season of the year when other non-specific affections of those organs are prevalent, and in places most favorable to those diseases. Thus whooping-cough and measles generally attain their highest prevalence as epidemics in the winter and spring, when bronchitis and other affections of the air passages abound. Scarlet fever nearly always spreads most rapidly in autumn, and occasionally in the spring, and at both these seasons relaxed and ulcerated throats are most common. And so for cholera and enteric fever, of which the maximum prevalence is in summer and autumn respectively, in accordance with an observation of Murchison, that "circumscribed epidemics, or the ordinary autumnal increase of fever, are often preceded by a great increase of diarrhœa." "It may be," as suggested by Dr. Ransom, "that the weakness of particular organs affords an opportunity for the entrance of the epidemic poison which has an elective affinity for those organs, and we may be able to meet and to ward off attacks of epidemics by paying especial attention to the prevention of diseases that weaken or predispose those organs to attack."

He then spoke of the prophylaxis of contagious disease, and mentioned what had been done with sulphurous acid, arsenic, etc. He also mentioned the difficulty of vaccinating a patient who is under the influence of arsenical preparations.

Alluding to the theory of contagium vivum, he expressed himself as opposed to the idea of spontaneous generation. The infectious matter of fevers and contagious diseases received lengthy consideration at the speaker's hands. Quoting the researches of Richardson, Burdon-Sanderson, Dalliger, Drysdale and others, he thought Prof. Tyndall had argued with pertinency and force, that "between the microscopic limit and the true molecular limit there is room for infinite permutations and combinations." He reviewed the experiments of Bastian, Tyndall, Jeffries Wyman, and Burdon-Sanderson, as well as of others.

While thus recognizing the fact that in simple septicæmia the microzymes are not the direct agents which produce the pathological results, we may justly enter a protest against the grave error of those who "maintain, in the face of all the experimental investigations relating to the subject during the last few years, that these organisms are without pathological significance. As Dr. Sanderson pertinently and justly remarks, "if these infinitely minute organisms are present in every intensely infective inflammation, we may be quite sure that they stand in important relation to the morbid process." He has further shown that bacteria grown in Pasteur's cultivated liquid, there being no putrid albuminoid matter present, are for the first crop inert, but eventually a product is obtained which possesses all the virulence of putrescent animal or vegetable infusions—a possible explanation being that the liquid becomes charged with the excretions of the bacteria or with the products of the decomposition of dead bacteria.

Now as to the doctrine of a *specific contagium vivum* for each of the specific fevers, I think it a sufficient answer to most of the objections urged against this doctrine, to remark that however plausible some of these objections may appear they are at once refuted by the conceded positive demonstration of such a contagium in a single case, namely, splenic fever. Koch having ascertained that the *bacillus anthracis* produces spores when grown in the cultivating liquid, proceeded to test the pathogenic activity of rods and spores as thus produced. The inoculation of either rods and spores into a small incision in the skin of a mouse produced splenic fever in every instance. If the tested material caused no development of rods and spores in the inoculator, it failed to produce splenic fever by inoculation. The proof is likewise nearly complete in the case of relapsing fever. It is now generally known that the discovery by Dr. Obermeier, of Berlin, of minute spiral organisms in the blood of patients suffering from relapsing fever has been fully confirmed by later observers. He then gave a brief historic sketch of the theory alluded to above, giving due meed of praise to Dr. J. K. Mitchell, of Philadelphia, for lectures delivered in 1846–47, on the cryptogamous origin of fevers.

In conclusion, Dr. Cabell thought that when we thus find innumerable analogies between the phenomena of the contagious fevers, and those connected with the development and life of certain low organisms, analogies so numerous and so close that every peculiarity in the manifestation of the fevers as to mode of development and spreading, will be found to be susceptible of interpretation in terms of the doctrine of a *contagium vivum*, and many of them not susceptible of any other explanation, and that, moreover, a positive demonstration has, it is universally conceded, been given in the case of splenic fever, not to insist upon the almost equally conclusive proof in the case of relapsing fever and diphtheria, nor upon the apparently conclusive demonstration given by Chauveau and subsequently confirmed by Sanderson and by Braidwood and Vacher, that the contagium of vaccinia and variola consists of transparent vesicles, first recognized by Beale, not exceeding, according to Sanderson, the 1-20,000 inch in diameter, it does appear that a very strong case has been made out in proof of the general doctrine in question.

Without appealing as much to what may be called popular taste, there was food for a great deal of earnest thought in this address, which was listened to with great interest by those who heard it.

Upon its conclusion, Dr. Sayre arose to a question of personal privilege, and asked that the Secretary be requested to place him upon record as opposed to the resolutions adopted at Detroit and Chicago, which declared that a fracture of all long bones could not occur without shortening. The request was granted, and the morning session ended.

Afternoon—Work in the Sections.

Section I.—Dr. Bulkley being still absent, the subject of his paper—the rubber bandage—was discussed, especially by Dr. Martin, of Boston, who has done so much toward its introduction.

A paper on "Separation of the Ileum and Spontaneous Occlusion of the Divided Extremities," was read by Dr. Rochester, of Buffalo, who showed at the same time a valuable pathological specimen, which served as a text for his remarks.

Dr. Palmer, of Lockport, New York, exhibited a patient who had suffered from a large goitre, which he had successfully treated by subcutaneous injection of fluid extract of ergot, and read a paper on this method, which he warmly praised.

Dr. Davis then started a long discussion on the address of Dr. Loomis before the General Session. The subject of the sanitarium was discussed from various standpoints, including the extremes of favorable and unfavorable opinions. The outcome of the discussion was a resolution that Dr. Denison of Colorado be requested to study the subject of the climatic treatment of pulmonary phthisis as he found it in Colorado, and report at the next annual meeting. The section then adjourned *sine die.*

SECTION II.—A paper by Dr. Warren, of Boston, on "Connection of the Hepatic Functions with Uterine Hyperæmias, Fluxions, Congestions and Inflammations," was read by Dr. Storer, of Newport. It was a clear exposition of the dangers of treating specific diseases without due reference to general conditions.

Dr. Storer spoke strongly in advocacy of the principles put forth in the paper. The profession, he said, were in great danger of becoming too specific in the treatment of gynæcological diseases, and he felt the time had come when a retrograde movement would be a benefit.

Dr. Marcy spoke of the dangers which specialists were prone to run into in forgetting that there was anything to be watched, outside of their own territory.

Dr. John C. Irish's paper on "Dr. Burnham's Surgical Treatment of Uterine Fibroids," was read by Dr. Dunster. The subject was but briefly discussed.

Dr. E. Cutter, of Boston, was unable to read his paper on the use of electrolysis for the same disease, but made some remarks upon the subject.

A paper by Dr. Engelman, on Battey's Operation for the Extirpation of the Ovaries was read, and briefly discussed. The Section then adjourned *sine die.*

SECTION III. Dr. Hamilton, of New York, read his paper on "Exsection of the Metatarso-phalangea Ar ticulation in Valgus of the Great Toe." He alluded to various deformities, especially

hallex valgus, caused mostly by ill-fitting shoes. In these cases of hallex valgus there was a subluxation of the phalanx, with almost complete obliteration of the synovial sac. In their treatment mechanical appliances were of little use. Amputation mutilates and removes an important point of support, and is more dangerous to life than excision. A subcapsular and subperiosteal excision of the metatarsal capitulum has been recommended, the toe to be brought into shape and the wound allowed to granulate. In his first case, he did not make the operation under the periosteum or capsule, but was yet successful. He now makes a flap on the inner aspect of the foot, slips a chain saw under the head of the metatarsal bone and removes it. He has been successful in a number of cases, and exhibited photographs of some of them before and after operation.

Speaking of the treatment of the incision with hot water dressings, the speaker took occasion to lay great stress upon the immense advantage of this method of treating traumatic or operative lesions.

On motion the regular order was suspended to allow Dr. Sayre to exhibit to the Section a child that had been treated and cured of Potts' disease by the application of the plaster jacket, after the method peculiar to himself. The child had taken no medicine, and was free from any prominent deformity.

Dr. Gunn offered the following resolution :

WHEREAS, This Section having expressed an opinion on long bones, and

WHEREAS, In general convention a member has asked and been accorded the privilege of recording his protesting vote, therefore,

Resolved, That this Section re-affirms its opinion that shortening, in cases of fractures of the long bones, is the rule in practice regardless of any of the means of treatment now in use.

The resolution was earnestly and warmly discussed by Doctors Kellar and Sayre in the negative and by Dr. Frank Hamilton in the affirmative. The resolution was finally adopted, Dr. Sayre requesting that his protest against the opinion it expressed be placed on record.

The introduction of this resolution, and its discussion, gave

opportunity for display of some little personal animosity, which seemed entirely out of place, and should be deprecated by all.

Next Dr. Packard, of Philadelphia, entertained the Section with a paper on "Fractures near the Wrist Joint," which proved interesting of itself, and called forth very interesting discussion. Dr. Moore, of Rochester, claimed that in Colles' fracture there was more or less luxation of the ulna, and illustrated his remarks by quoted cases and specimens. He claimed that two weeks was long enough for such a fracture to be done up in splints, and that the tendons and soft parts would usually suffice of themselves as a splint, so that merely a sling was called for. He reduces such fractures by a method of circumduction, pulling in the direction of the fracture, and disengaging the styloid process from the annular ligament, if it shall have pierced it, as it often does. Dr. Hamilton added a few words commending and commenting upon Dr. Moore's remarks.

Dr. McGraw, of Detroit, read a paper on the "Pathology, Diagnosis and Treatment of Cancer," discussing the uncertainty of correct diagnosis before it is too late, and advocating the early removal of any tumor or induration which was not beyond all question benign. He esteemed it dangerous to leave even skin enough to cover the wound, but would have it heal by granulation, and spoke of amputating the arm and shoulder in selected cases of cancer of the breast.

Dr. Marcy, of Cambridge, Mass., contributed a paper on the use of carbolized ligatures in the operation of herniotomy. He thought too many failures in using the carbolized cat-gut ligature due to unskillful preparation. Even the slipping of knots was avoidable if the ligature were properly prepared in the manner described by Lister.

SECTION IV. The Section was principally occupied in hearing Dr. Deecke, special pathologist of the asylum for the insane at Utica, read a paper on "Microscopic Examinations of the Nervous Centers," which proved of much value and interest to those who listened to it. The Doctor exhibited several micro-photographs prepared by himself and Dr. Gray; and also specimen dissections mounted on glass for the microscope.

SECTION V. A letter from Dr. F. H. Hamilton of New York,

was read declining to report at the next meeting of the Association on the subjects discussed in Dr. Seguin's paper, for the reason that he had not time to make such a report. A discussion then arose on the subject of the paper read by Prof. Cabell, the Chairman, before the general session during the morning.

On motion, Dr. R. J. O'Sullivan, of New York, was appointed Chairman, and Dr. William Clendinen, of Cincinnati, Secretary of a committee to present the report at the next annual meeting, declined by Dr. Hamilton.

A criticism of Dr. Cabell's address was then entered into by Dr. Bell, of New York, in which he made many excellent suggestions in regard to the sewerage in various parts of the country and the objectionable condition of most of the privy-vaults in villages and in fact nearly all of them outside of the larger towns and cities.

The Chairman then read a paper on "The Bearings of Hygiene on Therapeutics," by Dr. Black, of Newark, Ohio.

The writer concluded as follows:

"A pathological therapeutist is very apt to treat a chronic intermittent thus: A mercurial cathartic to clean out the abdominal viscera, then quinine in large doses, and if this does not succeed, then in larger and yet larger, to destroy or neutralize the hypothetical malaria in the system. Cases have I seen by the score, who had received such treatment for weeks and months unavailingly, who had taken quinine and iron until they were, as they expressed it, almost blind and deaf, and yet the disease persisted, with very brief cessations. As a hygienic therapeutist, and as one who has had a large experience with chronic intermittents, I unhesitatingly affirm of this latitude, that scarcely a case of intermittent fever need ever become chronic, and that even when so, proper management will hold the symptoms under control, until the tendency is wholly overcome. The outline of the method is as follows: Enquire carefully into the history of the case, and whether acclimated or not, directing special attention to each of the abdominal organs, and if much deranged administer the best active corrective at once. Then anticipate the next paroxysm with 12 grains quinine, divided into three doses, beginning its administration eighteen hours before the time of the expected chill. Repeat

this amount of quinine every seventh day for four consecutive weeks, but at no other time, except when the patient's indiscretion brings on an irregular paroxysm. During the intervals administer daily, gentle remedies appropriate to correct the functions that show the most derangement. These remedies should be such as will keep the organs mainly at fault, up as near as possible, to the standard of healthy action, and no more, never allowing the secretions or excretions of any organ to sink far below the healthy standard, nor causing them to rise much above it. The diet should be strictly hygienic, and so also, of the exercise, not permitting the vital energy to be spent in toil, that should be devoted to recuperation. To guard against external variations of temperature, especially in the unacclimated, flannel should be worn next the skin. The grand condition of success lies in the method and means for keeping all the abdominal organs during every day and for several weeks, up to the standard of healthy action, and thus triumphantly raise the health above the ague-point. Quinine is invaluable for the arrest of periodicity, but nothing more."

After some discussion the Section adjourned *sine die*.

Friday Morning—General Session.

Upon the opening of the final general session at the usual hour this morning, President Richardson announced the following ozone committee, appointed pursuant to the action taken yesterday: Dr. N. S. Davis, of Illinois, Chairman; Dr. J. S. Billings, U. S. Army; Dr. W. N. Geddings, of South Carolina; Dr. J. M. Toner, of the District of Columbia, and Dr. S. M. Bemiss, of Louisiana.

The following communication was received from the Medical Society of the State of Pennsylvania, and, after being read by the Secretary, was ordered entered on the minutes.

At the annual meeting of this body held in Pittsburgh, May, 1878, it was unanimously—

Resolved, That the Medical Society of the State of Pennsylvania, recognizing the advantages of the metric system, from its universality, simplicity and scientific character, does recommend the use of the same to the members of the society, and urges

them to familiarize themselves with it, and to advise their students to use it exclusively when they commence their medical career.

Resolved, That in all communications made to this Society in which reference is made to weights and measures, the metric system only should be used.

Resolved, That the Secretary of this society is instructed to bring this action of this society to the notice of the American Medical Association at its next meeting, and urge upon the National Association a similar action.

The preamble and resolutions were adopted.

A resolution was offered by Dr. Seguin asking the confirmation of Drs. Sims, Drysdale and Seguin as Commissioners and Delegates for the question of medical uniformity in Europe, to report next year. Adopted.

Dr. Davis next offered the following resolution, which was adopted:

Resolved, That the Section on Practical Medicine, Materia Medica, and Physiology recommend the appointment by the American Medical Association of a committee of five members, to whom shall be referred so much of the recommendations in the address of the President of that Section as relates to the establishment of proper sanitaria for consumption, and the more accurate utilizing of the various mineral waters of our country, with instructions to report at the next meeting of the Association.

Accordingly, the President appointed the following members as such committee: Dr. H. I. Bowditch, of Massachusetts; Dr. A. N. Bell, of New York State; Dr. J. L. Cabell, of Virginia; Dr. S. E. Chaillé, of Louisiana; and Dr. Charles Denison, of Colorado.

The President announced the following delegates:

To European Medical Societies—Drs. Sims, Drysdale, Seguin, Daly, Halberstadt, Levis and W. H. Pancoast.

To the Canadian Medical Association—Drs. Brodie, Todd, E. N. Brush and W. Clarke.

The following resolutions concerning certain legal relations of the insane, offered by Dr. Foster Pratt, of Michigan, in Section V, and referred to the Association, were received and adopted:

Resolved, That the personal restraint of the insane is an essen-

tial element of the medical treatment of their disease, the use of which, as a therapeutical agency, may be justified by their insanity, just as the use of it as a public agency, for the prevention of injury to person or property, is justified by their dangerous conduct.

Resolved, That while none question the necessity for specific statutory provisions to regulate the restraint of those insane persons who are wholly or partly a public charge; we maintain,

That it is the duty of relations and friends, and it is also their natural and inherent right, whether declared or understood by statute, to restrain and to care for their sick or insane relations as private patients at their expense, in their home, or in a legally recognized and regulated hospital; and

That the exercise, by them, of so much restraint as is essential to their proper treatment of his disease, is not a violation of his rights of personal liberty; and

That their duty and right to exercise such remedial restraint are subject to State surveilance or legal limitations, only so far as may be necessary to prevent their neglect of that duty or to punish their abuse of the right.

The following report of the committee to secure the appointment of State Boards of Health was presented and adopted:

Your Committee, consisting of the President and Permanent Secretary, who are required to report annually the results of their efforts for the organization of State Boards of Health, respectfully report that they have addressed the Governor of each State, where a Board of Health has not been organized, a memorial. A few Executives have courteously acknowledged this communication and expressed their earnest desire to further our efforts. We are happy to announce that three additional State Boards have been organized, making nineteen in all, viz.: Alabama, California, Colorado, Connecticut, Georgia, Illinois, Kentucky, Louisiana, Massachusetts, Maryland, Michigan, Minnesota, Mississippi, New Jersey, North Carolina, Tennessee, Rhode Island, Virginia, Wisconsin.

Dr. X. C. Scott called up the resolution of last year, creating a new Section of Ophthalmology, Otology and Laryngology, to be known as Section VI, and moved its adoption. Carried.

On motion of Dr. E. Smith, of Detroit, Dr. H. Knapp, of New York, was made Chairman of the new Section, and X. C. Scott, of Ohio, was made Secretary.

The address of the Chairman of Section IV, Dr. Kempster, was then called for. This was principally composed of a consideration of "The Relations of Pathology to the Motor Centers." The speaker first gave a sketch of the use of the microscope in studying the histology of mental disease, and a review of the histological changes which have been discovered in such cases. Allusions to the researches of Fritsch, Hitzig and Ferrier were frequently made. He discussed the relations of the meninges to the convolutions, and quoted Crichton Browne's studies upon adhesions of the membranes over cortical motor centers as a cause of epilepsy and transient hemiplegia.

He alluded to cases of reported cure of general paresis of the insane, and considered them merely such remissions as do occur in the course of this disease. In support of the theory of localization of motor centers, he adduced numerous instances, a few of his own, and some drawn from the writings of Charcot, Dreschfeld, Ferrier and others. He mentioned the discovery of degenerative changes in the centers for members which had been amputated. In speaking of the views recently put forward by Brown-Séquard, on this subject, he said the weight of testimony and authority was greatly against him. When considering the researches of others upon the sensitiveness of the dura-mater, he described two cases in his own experience where convulsions had been caused by grasping with forceps the dura, which had been exposed by accident.

He had but brief space to devote to medical jurisprudence, but mentioned a recent Wisconsin case where the knowledge test was not considered sufficient proof of insanity. He hoped the time would come when experts would be called by the *court* when it should be deemed expedient.

The address was received with close attention.

The Secretary next read the annual report of the Treasurer, Dr. R. J. Dunglison, of Philadelphia. The report concluded as follows:

"The Treasurer is in constant receipt of applications from members for volumes of the transactions of the Association which are entirely out of print. As some of the members are in possession of scarce volumes, which they may not wish to retain, the Treasurer will willingly act as a medium of exchange, and thus accommodate those who are anxious to complete their sets." [Here followed a financial statement.]

The following report of the committee on Prize Essays was read by the local Secretary and adopted:

"Your committee to determine the merits of prize essays would respectfully report: That they have had three separate papers submitted to their inspection. Two of these papers present subjects of very great interest and show original researches, but are too imperfect in the estimation of the committee to command a prize. The remaining paper, in the judgment of your committee, is fully up to the requirements. Indeed the paper is so elaborate as to fill a large space in the volume of the transactions of the Association. The paper should be considered as *two* and not as *one*. The analysis of 789 cases of operation on the carotid artery, and the careful and minute measurements of the artery and its branches in 121 subjects, showing the range of variation and the per centage of the same, followed by inferences, bold and original, naturally constitute a paper complete in itself. Another one on the same plan with reference to the innominate and subclavian, being an analysis of 300 cases, and the observation of 52 subjects, is presented to us in such a manner that we may consider the whole as one prize, or they may compete for both.

"Your committee believe that both prizes should be awarded to the two essays by one person."

On opening the sealed envelope the name of the successful essayist was found to be Dr. John A. Wyeth, of New York city.

Dr. J. J. Caldwell, of Maryland, offered a resolution creating a new Section upon "Neurology and Electrology." Action was deferred for one year.

Dr. Maddox, of Baltimore, Md., offered another resolution creating a Section on "Diseases of the Genito-Urinary Organs, including Dermatology and Syphilis." Laid over.

Appropriate resolutions in relation to the life and death of

Prof. Henry, of the Smithsonian Institute, were offered by Dr. Toner and adopted.

Dr. Parvin, the President elect, was then introduced by President Richardson, with a few complimentary remarks, and the former returned his thanks for the honor conferred in eloquent and fitting terms.

Dr. Van Deman then offered a series of resolutions embodying the thanks of the Association, to the committees of arrangement, the officers, the people of Buffalo, and the ladies.

The Association then adjourned to meet at Atlanta, Ga., next year.

The number of delegates registered was five hundred and fifty. A pleasant feature of the meeting, to the writer at all events, was the comparatively large number of the younger class of practitioners chosen to represent the interests of the profession.

The receptions tendered by citizens of Buffalo were elegant in the extreme, and the social festivities ended with an excursion to Niagara Falls Friday afternoon.

It may justly be asked what amount of scientific work was accomplished by so large a gathering? The writer feels compelled to say that the amount of strictly original work exhibited was not amazing in either extent or importance. But it must, in candor, be said that most of the papers presented either admirable résumés of their subjects, or presentations of facts in a condensed and accessible shape. No one could have been present without feeling that he had received an equivalent for the trouble or expense of the trip.

A most admirable and important feature of the meeting, to which we have endeavored to do justice in this report, was the position given to subjects and discussion pertaining to matters of State Medicine, and public hygiene. The address of Dr. Cabell, the paper of Dr. Seguin, and hints and allusions in many of the papers or reports read, furnish ample evidence that the Association is doing a noble work in this direction, which it should be the object of every member to foster and encourage.

In conclusion, the writer acknowledges his obligations to the Buffalo daily press. Had its daily reports been accessible to the readers of this journal, there had been no call for this summary.

Report of a Lecture on the Morphology of the Blood in Syphilis.—By Dr. E. Cutter, of Boston.

This lecture was delivered as an extra treat during one of the evenings of the Association meeting: and while not purporting to be classed among its proceedings, and although other attractions of a social nature were offered, yet the interest it excited, and the audience it drew, certainly make a short report of it very desirable. It was profusely illustrated on the screen by the stereopticon, with photographs of the doctor's own preparations.

He first spoke of the morphology of fungi and algae, and their distinctive differences, which were that fungi give off carbonic dioxide at night, and contain neither starch nor chlorophyl, while algae give off oxygen in the day time, and contain both starch and chlorophyl. He then spoke of, and briefly described spores and sporidia; and, alluding to the number of known species, said that there were fourteen thousand species of algae and eight thousand species of fungi, known to and described by naturalists. All this was introductory to speaking of the presence of fungi in the blood.

He alluded to Salisbury's and Lostorfer's researches, and spoke modestly of his own patient and laborious investigations in this subject, extending over a period of several years.

Speaking then of the connection of fungi with syphilis, he said he had dissected with extreme care, more than a hundred chancres, and invariably found fungous filaments beneath them. The authors alluded to above had found that in this disease, the white corpuscles were enlarged, and the blood contained bacteria and mycelial filaments. He showed photographs of the yeast cell and of different fungi at the same time, with the sporidiæ or bacteriæ, regarded by some as separate organizations, by others as true spores. He then showed a variety of healthy red and white blood corpuscles, some enlarged so that the image of one corpuscle was sufficient to occupy the whole area of a large screen. He next showed syphilitic blood whose white corpuscles were much larger, and which also contained mycelial threads and bacteria, and one white cell whose walls seemed to have ruptured and extruded these spores—a phenomenon which the Doctor said he had seen occur.

The object of the lecture was to exhibit and insist upon the following characteristics displayed by syphilitic blood—the increased size of the white corpuscles, and the presence of bacteria-like spores and mycelium-like filaments, which are distinctly and always of a *coppery color*. Similar changes are noted in the blood of consumptives, and of patients suffering from erysipelas, diphtheria and other diseases, but while the fungi may present other colors, they never have the coppery hue which those above described possess. He thought the time might come when we could detect in this way the so called pre-tubercular stage of phthisis. In order to see these fungi, one must take the microscope to the bedside of the patient, and examine the blood as soon as collected. He thought this was one reason why they had been so seldom seen.

Dr. Cutter is one of the *very* few men who can handle a 1-75th inch objective; many of his photographs having been taken with a 1-50th and 1-75th. His apparatus, of which he exhibited a picture, is simple. His modesty was evidently a characteristic of the man—he claimed to be more a willing witness than a discoverer.

THE NEW MEDICAL SOCIETY met at the Washingtonian Home, Monday evening, May 13th, the President, Dr. Bridge, in the chair. Thirty-three ladies and gentlemen were in attendance.

After the admission of ten applicants for membership, Dr. Lyman read a paper on "Fermentation." After briefly reviewing the history of fermentation, the theories that have been advanced to explain its phenomena, he stated the two principle views now urged. One, advocated prominently by Pasteur, maintains that the presence of a vegetable fungus is necessary to the process; that alcohol and carbonic dioxide are excretions of this fungus ofter feeding upon sugar. Yet as these substances have been produced from sugar without the presence of such fungus, Pasteur saves his theory only by denying the right to the name fermentation, of any process not induced by the yeast plant or similar organism.

The other view—the physico-chemical theory, insists that the

common fact in all fermentations, is the presence of organic matter in a state of rapid change from complex to simplex forms.

A ferment is defined as "the product of an organized body; its molecules are in a condition of unstable equilibrium and are in a state of violent agitation, by virtue of which they are enabled to profoundly affect the modes of motion which obtain in th molecules of certain organized bodies or products of organizations."

Such rapidly disintegrating substances are found not only in the matter thrown off from the yeast cell (perhaps as an excrement), but also in diastase, ptyalin, pepsin, pancreatine and liver-ferment. These are the products of normal cell-action; a deviation from such normal action furnishes the ferment of hydrophobia, glanders, vaccinia, small-pox, measles, etc.

This idea simplifies the mysteries of infection, for by it we can understand not only the transfer of septic influence, but also the origin of such influence within the individual—a true auto-infection.

Moreover by supposing variations in the stability of molecular equilibrium of ferments, we may explain the variable intensity of the infection of typhoid fever, for example; and in the same supposition see the difference between sporadic and epidemic cholera.

So, too, the fatal persistence with which an unfortunate obstetrician occasionally infects his puerperal patients may be due not to any transfer of septic material from one woman to others, either by hand, clothing or atmosphere, but simply, to an infective process—"fermentation"—in the doctor's own person, which though it be impotent to affect his general health, is sufficient to profoundly impress the puerperal woman whose tissues are predisposed to such molecular disturbance.

Dr. Lyman elaborated at length the chemical theory of fermentation, with special reference to the zymotic diseases, making a very complete and suggestive paper.

In the discussion which followed, Dr. Allen mentioned two very interesting cases in which phthisis had been apparently communicated by infection.

Clinical Reports.

MERCY HOSPITAL.

Aneurism of the Femoral Artery Cured by Compression.—Reported by F. E. Waxham, M. D., House Surgeon, Mercy Hospital.

Antonio Corvini, Italian, aged 61, entered Dr. Andrews' surgical ward, March 17th, 1878, suffering from a very large aneurism of the femoral artery. Twenty days previous to entering the hospital he had noticed a pulsation in the lower third of the femoral artery, which appeared after a hard day's work. This pulsation increased rapidly in force, forming a tumor as large as a goose egg, and entirely disabling him. Upon entering the hospital, March 14th, the recumbent position was ordered, and the artery compressor applied just above the tumor. Pressure was exerted sufficient to arrest the pulsations in the aneurism, but it produced so much discomfort as to necessitate its removal, or a change of position, in a few moments. March 17th. Applied the artery compressor at several points above the aneurism, a few moments at a time.

March 19th. Finding the above means inefficient, compression was now made by two strips of board, each 10x3½ inches, placed across the thigh, one above and the other below. The under side being protected by a tin splint, well padded, the strips were fastened on the inner side by a bandage, and the free ends approximated by the artery compressor used as a clamp. This arrested the pulsations in the tumor, and was borne very well by the patient a few moments at a time.

March 20th. Still contiued the use of the clamp, but the aneurism seemed hardly less in size or force of pulsations. March

23d. The tumor seemed to be diminising slightly in size and increasing in firmness. March 24th. Patient kept up the pressure faithfully. March 26th. The walls of the aneurism seemed a little firmer. March 28th. Patient was put upon tr. aconiti and tr. veratri, to lessen the force and frequency of the heart's action.

April 3d. Pulse ranged from 52 to 56 per minute, from day to day. Pressure applied as usual during his waking hours. April 5th. No change was noted in the appearance of the tumor. April 12th. As the aneurism showed no further tendency to diminish in size, more vigorous measures were resolved upon, and continuous compression attempted. At 5 o'clock p. m., morphia gr. ⅓ was given and repeated every hour and a half during the night. He bore the pressure very well for half an hour, and then became almost frantic with pain, crying like a child. When he could stand it no longer the position of the pressure was changed. Ten o'clock p. m. He bore the pressure better, as a result of the effects of the morphia. The aneurism seemed to be growing smaller and harder. Pulsations were now seen distinctly just above the knee in one of the anastomotic arteries. Eleven o'clock. Was sleeping. Compression had just been maintained for forty minutes without a change of position; the longest period to-night as yet. The aneurism was decidedly smaller, but the pulsations in the anastomotic branch seemed to be increasing. These pulsations were irregular, about thirty per minute, but quite forcible, so much so as to be distinctly heard when the ear was applied, and plainly detected by the hand, this seeming to indicate the formation of another aneurism. The patient said he felt as if snakes were crawling through his flesh below the compression; doubtless due to the blood forcing its way through the collateral circulation, and the consequent stretching of the vessels. Twelve o'clock p. m. Pulse at the wrist, 48 per minute and regular. At one a. m. continues the same. Three a. m. Left him in charge of the nurse. The pressure had to be shifted every half hour.

April 13th.—At 9 o'clock a. m. vomited after taking his morphia. No more medicine given during the day, but compression continued, shifting the position every few minutes as the pain

necessitates; 5 o'clock p. m., gave morphia gr. $\frac{1}{3}$; at 7 p. m., morphia gr. $\frac{1}{2}$, causing nausea; at 9 p. m., gr. $\frac{1}{3}$, causing emesis. Morphia not repeated but pressure still continued during the night. The pulsation in the collateral circulation had ceased.

April 14th.—Tumor appeared harder and smaller. Pressure has been applied all day, but was omitted to-night in order to give him rest and sleep. Bowels moved four times to-day.

April 15th.—The aneurism appeared very much smaller. Compression had been applied all day, but no morphia used, the patient enduring the pressure about 15 to 20 minutes without shifting; 5 o'clock p. m. gave morphia gr. $\frac{1}{3}$, to be repeated every hour and a half, and pressure continued.

April 16th.—Tumor very much smaller.

April 17th.—Pressure not applied last night but continued during the day. Morphia given in $\frac{1}{3}$ gr. doses and pressure continued to-night.

April 18th.—Pulsations in the tumor had almost ceased.

April 20th.—Applied the pressure continuously for one hour to-day without a change of position, after which the pulsations were almost imperceptible.

April 23d.—Pressure applied during the day.

April 25th.—Pressure was applied several hours without intermission or a change of position, when the limb was found greatly swollen and œdematous, pitting upon pressure. Patient complained of great prostration, dimness of vision and distress at the stomach. Pressure was immediately removed and a little wine given.

April 26th.—Has been feeling very miserable to-day.

April 27th.—Was better; aneurism almost gone.

April 28th.—Pulsation in the tumor had entirely ceased.

April 29th.—Pressure applied to-day at patient's request, although the pulsations have not returned.

April 30th.—Was dressed and walked about the ward to-day.

May 1st.—Tumor quite hard and pulsations absent.

May 2d.—Left the hospital to-day entirely cured. Time in hospital 49 days.

The patient was seen May 27th. The tumor was small and hard, giving no inconvenience, and showing no disposition to return.

NOTES FROM PRIVATE PRACTICE.

Hypodermic use of Morphia.

Several articles have appeared in this Journal, relative to the use of hypodermic injections of morphia, in the main condemning it. The reports of cases by Doctor Wenger (see August No., 1877) seem to be quite indefinite, as neither the size of dose, nor a *complete* history of symptoms, were given. In the same article, Dr. Ingals reports a case, saying, "I dissolved one-fourth of a grain of morphia in pure water," etc., the patient almost immediately developing the most alarming symptoms. May not the syncope in this case have been due to other causes? Many persons faint upon much less provocation. In Dr. Brown-Séquard's lecture, published in the May No. of this journal, page 452, he says: "The patient was to be bled; the lancet had not gone in before the patient fainted away, the heart ceased to beat, and the limbs seemed to be dead. The patient was recalled to life with the greatest difficulty. Death would have occurred if the most energetic means had not been employed immediately." Is not this case almost exactly analagous to Dr. Ingals'? In summing up the writer says: "The danger seems to arise from rapid absorption, or injection directly into the circulation," etc. Is it possible, that out of the vast number of injections used, in so few cases rapid absorption occurs? I have never seen any marked difference in the *degree* of effect, which seemed to correspond with the rapidity of absorption. Again we find, "Nothing in the patient's history or general appearance can warn us of the danger;" and, "The results of my inquiries seem to leave us no other choice than reasonable doses by the stomach, or the frequent repetition of very small doses hypodermically." *Do* the results of his inquiries warrant such positive assertions? Do we know all that is to be learned about the subject? The fact is patent enough, that negative evidence is not as valuable as positive, provided always that the latter *is* positive. The doubt implied in the last sentence is my excuse for relating my own experience.

During six months in 1874, that I was in the wards of Cook County Hospital daily with Dr. Steele, then resident physician, and during eighteen months of service as a member of the house staff of the same hospital, one year as resident physician and surgeon, I saw used, and administered myself, almost daily, sometimes many times daily, hypodermic injections of morphia, without a single fatal result, or any unpleasant symptom other than nausea, except in two cases.

A man aged about 40, the subject of serious lesion of both mitral and aortic valves, with dilatation and hypertrophy, and suffering from many of the severe symptoms usually attendant thereupon, was given several times, (injudiciously I now think) for the relief of very severe angina pectoris, injections of one-half grain of morphia. Upon one occasion, having instructed the nurse to watch him carefully, in about four hours' information came that the patient was as he thought, dying. I found him in a deep sleep, pulse 36 to 40, respirations 4 to 6 per minute: roused him without great difficulty and administered aromatic spirits of ammonia and whiskey, which were all that was required. The second case, an hysterical girl, suffering from facial neuralgia, was given three eighths of a grain, the solution entering a vein, as was evident from the fact that a drop of venous blood followed the withdrawal of the needle, and from the rapidity of its effect, the patient throwing up her hands and exclaiming, "oh, my head!" and acting in a delirious manner. Relief from pain and sleep followed much sooner than I ever saw it before or since, but no coma, syncope, or other serious results obtained. In private practice I have repeatedly used this method, always with relief of pain and no bad results, the dose varying from one quarter to three eighths of a grain, so large, simply because smaller amounts do not produce the desired effect. I have never seen the characteristic effects of the drug follow in a "few seconds" or "immediately," as some of the reports indicate, except in the last of the two cases, when a vein received the injection. Is it possible that absorption from the areolar tissue can take place and give rise to such formidable results in a second or two? Is it not more reasonable to suppose that some other condition gives rise to the symptoms? Again, we find the writer using these words: "The

method is of little importance provided it is safe and agreeable to the patient."

Is this entirely true? Is it of *little* importance, whether the agony we are sometimes called upon to witness, is relieved in five or ten minutes or not for two or three hours, and perhaps not at all? The well known depressing power of pain, and more, its power to *kill*, is a strong argument against this assertion.

May not these "representative physicians" have been a little careless in administering the remedy in question, either in the size of the dose used, or in not recognizing or attaching sufficient weight to some pathological condition, or idiosyncrasy, which should have deterred them from its use? One of them gave it when the pain was already relieved, just to make the patient sleep; another used ten drops of a solution in which the dose "probably equalled one and one-half grains, and may have been six and one-half grains." another uses an injection in a case of puerperal convulsions, in which probably there was already cerebral hyperæmia, (as Dr. Wenger had suggested bleeding), and the well known action of morphia would be to aggravate the trouble. *Were these men justified in so using the remedy.*

In order that physicians may not be *unnecessarily* deterred from using hypodermic injections, let all possible light be thrown upon the subject.

The ability to *stop pain* in a few minutes, is a boon worth years of discussion.

In conclusion, let me give the rules by which I am governed in its administration.

1. Never use hyperdermic injections, except for the relief of intense pain, or where the stomach will not retain the drug.

2. Have a solution, accurately prepared, so that the *exact* amount given, is in every instance known.

3. As morphine and pain are mutually antagonistic, and as it is well known that far larger doses are tolerated when pain is present, make the size of the dose proportionate to the severity of pain.

4. Do not leave the patient until sure that no unpleasant effects will follow.

H. L. HARRINGTON, M. D.

WARREN COUNTY, ILLINOIS.

Three Cases of Tracheotomy, and Recovery of Each.

Case I. Foreign substance in trachea.

On the morning of October 2d, 1877, I was called in haste to see Willie D., a robust, healthy boy, aged two years and six months. The patient was quiet, but his respirations were very stridulous, especially on expiration. A physician had been called and pronounced the case croup; but the usual remedies employed failed to hinder the progress of the disease. From the history of the case the difficulty encountered on expiration convinced me at once that there was some foreign substance in the trachea. As the child seemed in imminent danger of death from suffocation, I at once proposed tracheotomy to the parents, as the only means of relief.

After summoning another physician, who readily agreed with me as to the diagnosis, we proceeded at once to operate, chloroform being the anæsthetic used. An incision was made and a kernel of corn removed from the trachea. The wound was then closed by sutures, and covered with carbolized dressings. A rapid recovery followed. The operation was attended with but very little hæmorrhage.

Case II. Foreign substance in trachea.

September 10th, 1875, I was called to see Emma W., aged five years, with symptoms similar to those described above. I at once proceeded to open the trachea below the isthmus of the thyroid gland, and extracted a large bean. I dressed the wound neatly and the patient made a recovery without any bad symptoms.

Case III. Croup.

I was called in November, 1877, to see Willie H., aged five years, and found the patient suffering from pseudo-membranous croup. He had been sick about four days, and was under the care of another physician. As death was inevitable unless something was done to procure relief, we advised immediate tracheotomy as the only means of saving life. The parents of the child objected to the performance of the operation, as they thought it would be productive of instant death; but after better thought, and becoming persuaded that there was no other possible hope for the child, they consented to have the operation performed on the

next morning. With the aid of an assistant, I proceeded at once to operate. The incision had no sooner been made than the child threw out a large amount of false membrane. I then cauterized the wound and inserted the tube. Chloroform and ether were employed as anæsthetics.

I was called again in a couple of hours, and found the breathing very difficult. On removing the tube, a large piece of membrane was thrown out of the opening. I then re-inserted the tube and did not remove it for three days. Convalescence then set in, and the patient made a complete recovery in the course of weeks.

As to the time when tracheotomy is to be performed, we urge an early operation, not deferring it until the patient is asphyxiated. In my opinion, the operation of tracheotomy would be the means of saving many lives, if physicians and surgeons would resort to it sooner, as I regard the operation when properly performed, attended with comparatively little danger to the patient.

The following means of diagnosis, which we take from "Watson's Practice," if observed will prove a great help to the average practitioner: "The symptoms that imperatively cry out for the operation are, increasing pallor, cold sweats, lividity of skin and lips, extreme feebleness of pulse, and sinking in, during every effort to inspire, of the costal spaces, of the hollows above the collar bones and the breast bone, and of the flexible lower margins of the thorax."

D. A. WALDEN, M. D.

BEATRICE, NEB.

Dr. J. D. Skeer's Adhesive Splints.

A strip of adhesive plaster, one half to one inch wide, is laid lengthwise, face side up, on the face of the splint (which has been previously covered with muslin), and fastened firmly by stitches through each end.

In applying this splint to the surface of the limb, the plaster, by adhering, will retain it in place, and prevent its slipping laterally or lengthwise.

In this way splints can be retained in position, where they could not well be by any method of adhesive strips placed across the back of the splints. They are especially applicable to

fractures of the thigh in infants and children, being retained in position by the "many tailed bandage" tied over the first splint. In this way Dr. Skeer has used them for the past five or six years with entire satisfaction.

Dr. Skeer does not claim absolute priority in this, but, so far as he is aware, it is original with him.

The writer, from his own experience, can testify to its value in such cases. A. H. FOSTER, M. D.

AUTOPSY AND BAPTISM.—*Le Progrès Médical* has recently published an article with this caption, which shows that the profession in France are fully sensible of their responsibilities and duties.

The French law requires that all autopsies shall be conducted only after the completion of certain legal formalities, which are very rigid and precise, including the permission of a magistrate under his hand and seal, and the actual presence of that official during the opening of the body.

Now, very recently, a pregnant woman at term, died (or was supposed to have died) at Champoly; and the priest in attendance, in order to baptize the unborn child, ordered a butcher to open the body. This was done, the child was extracted, and its soul saved (in accordance with the clerical theory) by the act of baptism—no magistrate being in attendance, and none of the legal formalities having been complied with.

Le Progrès Médical very justly inquires whether the priest shall have license to do that with the aid of a butcher, which the law forbids the man of science to do.

THE CHICAGO HOME FOR THE FRIENDLESS has recently made a change in its medical officers, which insures that hereafter its patients will not be treated in accordance with the tenets of the homœopathic faith. The newly appointed medical board is organized as follows: Consulting Staff: Dr. J. Adams Allen, Dr. De Laskie Miller; Attending Staff: Dr. E. Warren Sawyer, Dr. Jno. E. Owens, Dr. Jas. Nevins Hyde.

Editorial.

It must be now evident to every careful student of science, that the irresistible tendency of the time is toward the adoption of a uniformity of standards in nomenclature, and in the measurement of weight, dimension and temperature. The action of the National Government in legalizing the metric system in this country, and the recommendation, and in some instances the actual adoption, of the system by scientific bodies in America, taken in connection with the increasing number of papers which urge the necessity of such action, and explain its methods, are significant signs of the times.

However slow may be the process by which the metric system shall be introduced into the shop and the market, the intelligent members of the medical profession are evidently determined that its standards shall be observed, at least in the records and literature of science. It is clear that the adoption of the system will become general, first among the professional men of our country. They will thus very greatly contribute to its adoption in the other fields where its necessity is so apparent.

It is better to lead than to be left behind in any movement which contemplates so excellent a result. We are impressed with the fact that the Medical Journals of the United States will feel the obligation of being the great educators of their readers in this particular; and the CHICAGO MEDICAL JOURNAL AND EXAMINER, proposes to be in the advance of a movement of the proposed character.

We have therefore to announce that, hereafter, the metric system will be exclusively adopted in these pages in the printing of prescriptions and in the record of temperature and dimensions.

We beg our readers, and especially our correspondents, to take notice of this fact. In order to render the international metric system more easy of adoption, we propose to keep standing in each number of the JOURNAL, a few simple rules for the change of ounces, scruples and drachms into their equivalents in grams and centigrams, rules for the change of Centigrade degrees into those of the Fahrenheit scale, and a space ruled in centimetres and millimetres for ready reference.

And we conclude by urging those who may, at first thought, be dissatisfied with the prospect, to remember that the sooner they familiarize themselves with the system, the sooner they will learn to read what is destined to be the international language of science the world over.

THE METRIC SYSTEM IN MEDICINE.

OLD STYLE.		METRIC. *Gms.*
m i or gr. i.....	equals.....	06
f ℥ i or ℥ i.....	"	4
f ℨ i or ℨ i.....	"	32

The decimal *line* instead of *points* makes errors impossible.

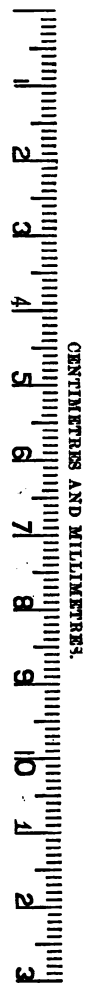
C. C. used for Gms. causes an error of five per cent. [excess.]

A teaspoon is 5 Gms.; a tablespoon, 20 Gms.

SEDATIVE LOTION TO BE USED ON THE BROW IN PAINFUL AFFECTIONS OF THE CORNEA:

Extract of belladonna..... 1 gram.
Extract of hyoscyamus..... 2 grams.
Distilled water.....150 grams.

—(Formulary of *L' Union Médicale.*)



Reviews and Book Notices.

PHYSICS OF THE INFECTIOUS DISEASES. By C. A. Logan, A. M., M. D. Published by Jansen, McClurg & Co., 1878.

We commenced the "interview" of this little book with an amount of partiality, as it is a child of Chicago, but were soon greatly disappointed to find that it did not do justice to the place of its birth. The title is novel, and we expected a treat; perhaps that is one reason why we feel the disappointment the more acutely. The style of medical literature may by some be thought to be of secondary importance, but if it is so, the secondary position is in close proximity to the primary. In the present instance the style is heavy and verbose. For instance, at the bottom of page 48, on the subject of ozone we read: "The whole subject is one of immense difficulty, as involving forces aud agencies of nature with which we are but little acquainted, and with whose ethereal existence we have but few channels of communication." What additional force or expression does the last sentence, "and with whose ethereal," etc., give to the already fully stated idea? Again, in the section commencing on page 46, our attention is called to the effect of ozone on "man and animals." Whatever view the author may take of the relation of man to the lower animals, man must be admitted as part of the animal world. The same remark will apply to the heading of the next section: "Its effects upon *insects and aerial organisms.*" On page 43 the author says, "most unfortunately, the reported result of all these observations," relative to ozone, "are so very conflicting as to furnish no data *upon which to erect any certain lights which may go to illuminate the dark corridors of disease-causation.*" The italics are ours, but we would suggest that we do not erect lights on data; and certainly the "*disease-causation*" should scarcely be likened to a house with dark

corridors. We had noted down numerous other instances still more glowing than these, but we cannot encroach more on this point. One more phrase, however, to substantiate our charge of verbosity. The author suggests an amendment to the time honored Latin dictum, *mens sana*, etc., which he would improve thus: "A sound nervous system makes a sound body." In terse English: Sound centres, sound whole.

However we may differ in opinion as to the value of style in medical literature, there will not be two opinions as to the right of accuracy to sway the sceptre. And here our author lays himself open to severe assaults. On page 143 we read: "Though the chemist by analysis may tell us the constituent atoms of certain products of the living being, and though he may be able even to reconstruct or produce some simple forms in his laboratory, yet his unimportant results in this direction only prove the existence of a force presiding over the methods of vital chemistry, which render him impotent to construct such eminently vital products as urea.

Now, in the first place, the chemist can and has for some years past manufactured *urea*. Moreover, it ill becomes any one who shows himself so little acquainted with what chemisty has done, even though he may be the most prejudiced opponent of the enthusiastic chemist, to dub his work as unimportant results, in face of the remarkable achievements which have been made in physiological chemistry in the last ten years.

In the section on nervous bankrupts, the trite observation is brought before us, page 196, "A man may labor hard at some merely mechanical work, and not suffer a tithe of that exhaustion which follows a much shorter period of brain effort by the same individual." That constitutes the substance of the whole section on "Nervous Bankrupts," and even in this observation we are obliged to differ from our author. It is not work that wearies a man, it is *worry*. It is not the work that we do that affects the nervous bankrupts, it is the work that we *fail to do*, having tried. And our opinion is that muscular work tires a man just as much as simple brain work.

There are many points of interesting discussion suggested in the book, but they would take up more space than could be afforded.

R. T.

BOOKS AND PAMPHLETS RECEIVED.

Fluid Extracts by Percolation. By Edward R. Squibb, M. D., Brooklyn, N. Y. Reprint from *Amer. Jour. of Phar.* for May, 1878, with additions by the author.

Metric Weights and Measures for Medical and Pharmacal Purposes. Published by the Government for Official Service.

The Intravenous Injection of Milk as a Substitute for Transfusion of Blood. Illustrated by seven operations. By T. Gaillard Thomas, M. D., New York. Reprint from the *New York Med. Jour.*, May, 1878.

A Contribution to the Therapeutics of Medicine. Read before the Section on Practice of Medicine in the New York Academy of Medicine, Nov. 20, 1877. By E. C. Seguin, M. D., President of the New York Neurological Society.

Lapar's Elytrotomy; A Substitute for the Cæsarean Section. By T. Gaillard Thomas, M. D., New York. Reprint from the *American Journal of Obstetrics and Diseases of Women and Children*, Vol. XI., No. 11, April 1878.

Second Annual Report of the State Board of Health of Wisconsin, for the year ending December 31, 1877.

Sterility and its Treatment. By William H. Wathen, M. D., Clinical Lecturer on Diseases of Women and Children, Louisville Medical College, etc., etc. Reprint from the Transactions of the Kentucky State Medical Society, 1877.

Amputation of Cervix Uteri. By W. H. Wathen, M. D., Clinical Lecturer on Diseases of Women and Children, Louisville Medical College, etc., etc. Read at the Kentucky State Medical Society, April 3, 1878. Reprint from May No. of *Richmond and Louisville Medical Journal.*

Comparison of the Results ot the Cæsarean Section and Lapar's Elytrotomy in New York. By T. Gaillard Thomas, M. D. Reprint from the *New York Medical Journal*, May, 1878.

A New Treatment for Spine Diseases. By Meigs Case, M. D., Oneonta, N. Y. Reprint from the *Cincinnati Lancet and Observer*, May, 1878.

Suicide Not Evidence of Insanity. Read before the Medico-Legal Society of the City of New York, March, 1878. By Hon. H. O. Palmer, of New York.

Original Lectures—Tumor of the Male Breast and Cyst of the Neck. By J. H. Pooley, M. D., Professor of Surgery, Sterling Medical College. Reprint from the *Ohio Medical and Surgical Journal.*

Physics of the Infectious Diseases, Comprehending a Discussion of certain Physical Phenomena in connection with the Acute Infectious Diseases. By C. A. Logan, A. M., M. D. Published by Jansen, McClurg & Co., Chicago, 1878.

Summary.

Colloborators:

DR. H. GRADLE, DR. L. W. CASE, DR. R. PARK,
DR. R. TILLEY, DR. D. R. BROWER.

PHYSIOLOGY.

THE GASTRIC JUICE.—(*Journal de l'Anatomie et de la Physiologie*, etc., March and April, 1878.) M. Grichet, in the above journal, has furnished its readers with a monograph on the gastric juice which cannot fail to be of great interest, both to physiologists and the medical fraternity. To appreciate the worth of the article it is necessary to know that M. G. enjoyed a privilege which happens only to few. Whilst he was serving as interne in La Pitié, a Parisian hospital, a patient obtained admission who was suffering from stricture of the œsopagus. It increased until it became absolutely impermeable. The stricture arose from taking by accident a mouthful of a strong solution of caustic potash. Its impermeability being demonstrated beyond all doubt, gastrotomy was performed by M. Verneuil, at the end of July, 1876, and in November the patient, Marcelin, was fully recovered, nourishment being of course administered by means of the gastric fistula.

M. G. has shown himself worthy of the special privilege which fell to his lot, by a series of experiments which will certainly be ranked as classical in the literature on the gastric juice. In this communication he does not confine himself entirely to his own experiments, but furnishes his readers in the first place with a succinct history of the literature on the subject, and then gives the morphology and histology of the glands of the stomach, not confining himself to the *genus homo*. It is, however, the second

and third chapters that are especially interesting to the practitioner, treating respectively of: 1. The chemical constitution of the gastric juice. 2. The gastric juice mixed with the alimentary substances and the action of the gastric juice on those substances.

In reference to the chemical constitution, by collating the experiments of the most eminent experimenters, he shows the remarkable divergence of opinion as to the substance producing the acid reaction, the votes being almost equally divided in favor of lactic acid on the one hand, and hydrochloric acid on the other.

The special precaution which M. G. has taken, and which has furnished him different results, is in washing out the stomach previous to his collection of the gastric juice for analysis. It will be remembered that the œsophagus was *absolutely closed*, and that no saliva could enter. On this account, after washing out the stomach, and giving the patient something agreeable to masticate, an abundant flow of gastric juice, quite free from saliva, and otherwise quite pure, could be obtained. This is of course a *sine quâ non* of accurate analysis. It is necessary to state here that while M. G. analyzed specimens of the gastric secretion by estimation of the chlorine in different ways, he conceived the happy idea of utilizing the principle developed by Berthelot, and known as the coefficient of separation (*coefficient de partage*). The principle is this: When an aqueous solution of an acid is agitated with ether, the ether and the water divide the acid according to a constant ratio, the numerical value of which is constant for every acid.

From his experiments, carefully detailed, it results that there is present in the gastric juice absolutely no lactic acid. He summarizes the results of his first series of experiments on this subject thus:

1. Fresh and pure gastric juice contains an acid insoluble in ether, and traces of an acid which is soluble.

2. In proportion as the gastric juice becomes old (vieillit) a kind of slow fermentation develops (somewhat analagous to putrefaction) and the proportion of organic acid increases.

3. This free acid seems to be sarcolactic acid.

From a second series of experiments he concludes:

1. The acidity of the gastric juice is due to hydrochloric acid.

2. This hydrochloric acid is not in a free state. A combination similar in its various reactions can be produced by heating a solution of hydrochloric acid with an infusion of mucus from the stomach.

3. This combination is hydrochlorate of leucine.

For fear of encroaching too much, we pass by the remarks on pepsin, in order to make a few abstracts relative to the experiments made by M. G. on the relation of the gastric juice to alimentary substances. His experiments that are recorded, amount to seventy. He has paid special attention to the amount and determination of acidity of the mixed contents of the stomach; and in his experiments has always referred its acidity to hydrochloric acidity as a standard. The observations made were at intervals of from one to five hours after the introduction of the articles of food. His deductions are:

1. The acidity of the pure gastric juice gives a mean of 1.3 parts by weight of hydrochloric acid to 1,000 parts of the secretion.

2. The acidity of the gastric juice and alimentary substances taken together, gives a mean of 1.7, and seems to increase slightly toward the termination of digestion. Neither the quantity of the matter nor the liquids in the stomach seem to exercise any very perceptible influence in changing the proportion of acid.

3. Alcohol and wine increases the acidity while cane sugar diminishes it.

4. After the ingestion of acid or alkaline liquids into the stomach the general contents gradually approach the normal acidity.

To do justice to M. G.'s efforts it would be necessary to translate the whole monograph, but we must content ourselves by giving one more summation. After combating the theory that a peculiar antiseptic power is possessed by the gastric juice and showing that fermentation goes on in the stomach as well as out of it, he continues: The fermentation of the alimentary substances contained in the stomach is almost always mistaken for the secretion of the gastric juice. The exosmosis and endosmosis which is

constantly taking place in the stomach, the process being facilitated by the large number of blood-vessels with which the stomach is furnished, make the acidity remain nearly always constant, varying only in a very small proportion. While the nature of the free acid, invariable for the pure gastric juice, is, on the contrary, very changeable, differing according to the nature of the food introduced. (The acid produced may be lactic, butyric, tartaric, etc.) As a certain amount of acidity seems necessary to the stomach, this development of acids seems to be a kind of economy of nature which supplements an acid secretion—the continual production of which would exhaust the system—by fermentations of different kinds. This fermentation is the more striking in proportion as the substance which produces it is more necessary to the economy, and attains its maximum of development in milk. If the gastric juice is very acid, that is, very rich in hydrochloric acid, the fermentation and putrefaction will be very low; if on the contrary the gastric is not large and not rich in hydrochloric acid, the acid fermentation and putrefaction will be very prompt.

This by no means gives a complete synopsis of M. G.'s production, but we trust sufficient has been given to afford the student points for reflection.

ANÆSTHETIC.—*Le Progrès Médical* of May 18, announces that M. Paul Bert has discovered that a mixture of 4-5 of protoxide of nitrogen and 1-5 oxygen, under an increased pressure of 1-5 of an atmosphere, will produce complete anæsthesia in a dog without any perceptible change in pulse, temperature, or respiration. The particulars of this experiment are not given, but to clothe it with authority, we need only say that Paul Bert is the successor to the renowned Claude Bernard; that he has demonstrated by experiments on himself in an air tight chamber, that the phenomena experienced by those who make high ascensions are not due, as was formerly thought, to the rarefication of the atmosphere, but to the diminution of oxygen. We cannot forbear to narrate here a little incident illustrative of M. Bert's patience as an observer: He was studying the effects of light on the sensitive plant, and during seventeen diurnal revolutions, he visited the plant night and day every two hours! The announce-

ment of the above method of producing anæsthesia before a Parisian assembly of scientific men by a man of such patience, is not likely to be without important significance.

Practical Medicine.

Contagiousness of Phthisis. — Tappenier ("*Lo Sperimentale,*") Jan., 1878.

All physicians have observed cases of phthisis rapidly developed in individuals who had for a long time attended on patients in this disease, even when such attendants had not presented any predisposition, either individual or hereditary. Dr Tappenier believes that the explanation of the fact is to be found in the inhalation of the expectorated matter, scattered in the air by the coughing of patients. In order to test this opinion, he made experiments, by intimately mixing a certain quantity of the sputa in a little water; he pulverized this emulsion by an appropriate process, and subjected some animals to the inhalation of the substance during one or two hours every day. These experiments were made in the Anatomico-Pathological Institute of Prof. Buhl of Monaco. Dogs were selected, as animals presenting the least predisposition to contraction of the disease. Three perfectly sound dogs were put into the pen of the institute; the pen is situate near a window, and is closed in all parts, excepting above, where it receives the external air through a door which is furnished with a fastening. Some sputa was obtained from a patient in phthisis, a spoonful of which was mixed in a quantity of water sufficient to make of it a liquid similar to almond milk, and every day pulverization of this was made in the pen during an hour, or an hour and a half. At the same time, for the purpose of studying absorption, by the digestive system, of the tuberculous matter, two of the dogs were made to swallow a certain quantity of it, from the same patient.

The whole five dogs had apparently a good appetite, and presented neither cough nor diarrhœa, they ate freely, and were cheerful and nimble, without any symptoms of illness, unless a

slight wasting and arrest of development. At first view, therefore, the experiments gave a negative result. But the day preceding the first autopsy, a little finely powdered carmine was mixed with the tuberculous liquid, in order to discover how far it had penetrated into the respiratory passages. Two of the dogs subjected to inhalation, and the two which had swallowed the tuberculous mixture, were killed six weeks after the commencement of the experiment. The autopsy of the fifth had been made at the end of three weeks.

The results of the autopsies were surprising. The five dogs presented a general miliary tuberculosis of both lungs, of the liver, the kidneys, and (at least in the two that had swallowed the tuberculous matter) of the digestive apparatus. The numerous stains of carmine which were seen on the pulmonary surface, showed that the inhaled liquid had penetrated into the pulmonary cells. The microscopic examination made by Prof. Buhl, established in the clearest manner the reality of the lesions.

It has, therefore, been established experimentally that in the dog, a general miliary tuberculosis can be induced from the inhalation, or the ingestion of the matter expectorated by a phthisical patient. The possibility of contagion of phthisis through the natural channels, may therefore be concluded.

The hygienic and clinical consequences of the experiment are of high importance. And first of all it is to be noted that those dogs continued in apparent sound health, despite the existence of general miliary tuberculosis. It is, therefore, possible that in man a miliary tuberculosis may rest latent during a certain time, and may not become a real and declared phthisis, before the development of foci of inflammation. But that which is of chief importance is the possibility of transmission of tuberculosis from man to man.

In ordinary conditions, that is to say, in fresh and frequently renewed air, the matters expectorated, and suspended in the air, may not become sufficiently concentrated to have the power of inducing tuberculous infection. But when a certain number of phthisical patients reside together, and through fear of cold or of draughts, the place is but little, or not at all ventilated, may we not fear that the expectorated matter will accumulate sufficiently to

become dangerous to healthy persons living in the same quarters? Ought we not, therefore, in this regard, to take precautions, sometimes neglected, particularly in the wards of hospitals? Is it not, perhaps, prudent to recommend to consumptives never to swallow the matter brought up from cavities, which may have a deleterious influence on the digestive canal? Finally, may not these experiments, in some degree, explain the transmission of phthisis from husband to wife, or *vice versa*, and, consequently the advisability of avoiding conjugal intercourse?

The facts stated by Dr. Tappenier are of great interest, and may explain many points of the important question of the contagion of phthisis.

THE PREVENTION OF PUERPERAL FEVER. (*Berliner Klin. Wochenschrift*, 1878.)

It appears that the idea of "listering" in obstetrics (the Germans have coined the verb "listern" to express the use of Professor Lister's antiseptic method, just as from Galvani's name we have coined the verb "galvanize") was first started by Bischoff, of Basle, in 1870 (*Correspondenzblatt für Schweizer-Aertze*, 1875, Nos. 22, 23). His plan consisted in giving a bath as soon as the first pains of labor were observed, washing out the vagina with a 2 per cent. solution of carbolic acid every two hours, and anointing the fingers of the medical attendant with 10 per cent. carbolic oil at each examination, the hands being previously disinfected by washing them with 3 per cent. aqueous carbolic acid. In case the hand had to be passed into the uterus, or if the fœtus was dead and decomposed, the uterus was washed out with a 2 to 3 per cent. solution of carbolic acid; and in every case frequent injections of the latter were made into the vagina and uterus for thirteen days after the birth of the child. Immediately after the labor, any wound was touched with a 10 per cent. carbolic solution, no ligature, if such were necessary, being applied until this had been done. Lastly, a pad of wadding, soaked in carbolic oil (one to ten), was placed in the entrance of the vagina, and constantly renewed. Under this system the number of cases in which morbid symptoms were present, consisting in a febrile temperature of more than two days' duration, and reaching 38.5°

Cent. (101.3° Fahr.) at least on one day, tenderness of the abdomen on pressure, fetid discharge, etc., was, in 1870, 14 per cent.; 1871, 22.3 per cent.; 1872, 24.5 per cent.; 1873, 16.8 per cent.; 1874, 10.7 per cent.; 1875, 8.9 per cent.; or taking the average of the whole, 16.2 per cent. for the six years.

In 1875, H. Fehling published (*Archiv für Gynakologie*, Band xiii., s. 298) the results of experiments made for about a year in Professor Credé's clinic at Leipsic, and which consisted in applying a mixture of salicylic acid and starch (one to five) to any wounds of the external genitals and in syringing the vagina four to eight times daily, in case of fever and fetid discharge, with solutions of salicylic acid ($\frac{1}{6}$ to $\frac{1}{10}$ per cent.) The effect was excellent, but the use of the carbolic spray during labor, which was also tried for some time, was given up in consequence of the post-partum hemorrhages which it appeared to induce.

In 1877, Adrian Schücking (*Berliner Klin. Wochenschrift*, No. 26) suggested that the vagina should be washed out at the end of the labor with a 5 per cent. carbolic solution, and that immediately afterwards the uterus should be continuously irrigated by means of the apparatus of which we gave a brief description in our former article on this subject. This method was carried out in eight cases, in five of which the patients had had severe labors, and all recovered satisfactorily, no temperature being recorded over 38.4° Cent. In the other three, the injection was not begun until after the commencement of febrile symptoms, but an immediate and decided defervescence was the result. Professor Zweifel's objection to Schücking's conclusion, that in the five former cases the fortunate termination was directly due to the treatment, is, first, that the number of Schücking's cases is too small; and secondly, that equally good results are possible without any antiseptic treatment. With this objection most persons will, we think, be inclined to agree.

Professor Zweifel's own method, to which we shall devote the remainder of this article, is founded partly on the use of antiseptic measures, properly speaking, and partly on the adoption of the most scrupulous cleanliness in connection with the surroundings of the puerperal woman. In the first place, all vaginal examinations *during pregnancy* are, in his clinic, made only after

careful washing of the hands and smearing with carbolic oil, the vagina being further washed out afterwards in some cases with 5 per cent. carbolic solution. The reason for these precautions is the possibility of infectious matter being introduced into the vagina previous to labor, of its lying there and being sucked up into the uterus after the expulsion of the fœtus. "This," says Professor Zweifel, "is a possibility which no one will deny."

The rooms and beds destined for the use of the lying-in women are carefully disinfected by burning sulphur in them in fireproof vessels, allowing about four grammes of sulphur to each cubic metre of space. The bedclothes are spread out so as to expose as large a surface as possible to the fumes, which after a few hours are allowed to escape by opening the windows.

After each labor in which the hand has been introduced into the uterus, or where air has gained entrance to it, or gaseous decomposition occurred in it, the uterus is washed out with several litres of fresh water.

Since almost all the cases of puerperal fever are found to be complicated either with ruptured perineum, small rents in the vagina and vulva, or with the introduction of air into the uterus during some operation, the greatest care is bestowed on all external wounds, to which Fehling's mixture of salicylic acid and starch is applied with the best results. Careful examination of the external genitals day by day, and the use of the thermometer, are also rigorously attended to. It should be added that, at Erlangen, the Obstetric Clinic has a separate pavilion to itself, which was built in 1874. The number of births from April, 1876, to October, 1877, during which period the above method has been carried out "with pedantic strictness," has been 184, with a *single* death—that of a woman with cancer, on whom the Cæsarean operation was performed. In 143 cases the lying-in period was completely normal—that is to say, the temperature never exceeded 38° Cent., or, at any rate, was never above 38.4° on more than one day. Out of the remaining forty-one, thirteen never had any morbid symptom except a rise of temperature on one or two days to 38° to 39° Cent., or on several days to 38° to 38.5°; twenty-eight had the symptoms of puerperal fever in a greater or less degree, but of these only

twelve had protracted fever, inflammatory exudation, and showed clear signs of puerperal infection, and in only five cases was life ever in any apparent danger. It was further noticed that the cases which did badly were not evenly distributed through the whole period of observation, but were limited to the months of December, 1876, and January, 1877, and of September and October, 1877, in the form of small epidemics. On the whole, Professor Zweifel considers that his results are by no means inferior to those of Bischoff, and that they do not point to any necessity for introducing a more complicated antiseptic system into his practice. Moreover, Spiegelberg at Breslau, has carried out a system closely resembling Zweifel's since 1874, with the splendid result of only *five* deaths in *nine hundred* labors.*

With such evidence before us it seems to be our bounden duty to urge on the medical profession in this country to habitually adopt the measures by which alone, as far as present knowledge goes, puerperal infection can be prevented—namely, scrupulous cleanliness and the use of antiseptic lotions, etc., for disinfecting the examining hand and the genital organs. Even the busiest practitioner can manage to invariably examine with carbolic oil instead of ordinary oil or grease, and in the most out-of-the-way places vinegar or brandy, as Professor Zweifel says, are sure to be found as substitutes for carbolic or salicylic acid.

We are not sure that in private practice the need of these precautions is not as great as in the hospital ward; for the risk of picking up infection somewhere, and conveying it to the lying-in room, is naturally very great when the same man is seeing on the same day medical, surgical, and obstetric cases. He may go straight from a scarlet fever case to a woman in labor; and a most melancholy instance occurs to us in which a very valuable life was probably sacrificed in this way not so very long ago. The old discussions about puerperal fever, which we find reproduced even now in text-books on midwifery, are out of date in the light of our modern knowledge. We *know*, for example, that the woman who gets fever, peritonitis, and vomiting just

* For further information on this subject see also the *Zeitschrift f. Geburtshülfe und Gynækologie*, ii., 1, containing papers by Schullen, Richter, and Langenbuch.

after her confinement, has been infected with poison *from without*—whether bacterial or otherwise makes not the slightest difference; we *know*, too, how to prevent the entrance of this poison into the woman's system, though we may be very helpless when it has once entered it. Knowing all this, and knowing, too, the high mortality from puerperal fever, and that probably more than a thousand women die of it in England every year, is it not our plain and simple duty to try and carry out, at any rate, the major operations of midwifery in future, with the same attention to antiseptic precautions as Mr. Spencer Wells observes in performing ovariotomy?

ŒDEMA OF THE LUNGS.—In a lengthy article in Virchow's Archiv (Bd 72, Heft. iii.), Dr. W. H. Welch, of New York, gives the results of his experiments conducted in Cohnheim's laboratory, on the causes of œdema of the lungs. Leaving aside the collateral and inflammatory forms, which he refers to inflammatory alteration of the vessel, he made a special study of congestive œdema. In the first place, attempts were made to cause pulmonary congestion (and œdema) by obstructing the aorta and its branches. In the rabbit œdema could be obtained only by ligating all vessels carrying blood from the left ventricle, except one—the carotid or subclavian artery. In the dog, it was found absolutely necessary to close the aorta and all its branches.

Lichtheim had previously found—and this was confirmed by Welch—that the tension in the pulmonary arteries is remarkably independent of the blood-pressure in the systemic circulation, a ligature around the descending aorta will raise the blood-pressure enormously in the still patent carotids, but will scarcely affect the pressure in the pulmonary artery. In fact the complete retention of blood in the left ventricle from closure of the aorta, raises the pulmonary blood-pressure only to about $3\frac{1}{2}$ times its original value.

To produce pulmonary œdema, an immense increase in pulmonary blood-pressure is thus requisite. Similarly, it requires an enormous obstruction of the pulmonary veins to render the lung œdematous. Ligature of all pulmonary veins will produce œdema, but not always, since the circulation will sometimes cease before

œdema pulmonalis can occur. If, however, a small venous twig alone is left patent to carry the blood back to the heart, œdema is the invariable result. The same may also be obtained by compressing the left auricle, so as to obliterate its cavity almost completely.

These extreme conditions are, however, unlikely to occur in man. How are we, therefore, to explain the frequency of œdema of the lungs, one of the most frequent observations, post-mortem? If the left ventricle were unable to dispose of the blood sent by the right ventricle through the pulmonary vessels, a stasis would finally result in the lungs. This we would expect to occur when the left ventricle is paralyzed or at least weakened as compared with the right side of the heart. After long trials, Welch succeeded in producing this condition by compressing the left ventricle with his fingers. Whenever he succeeded in thus stopping the left side of the heart, while the right ventricle continued to pour its blood into the pulmonary vessels, pulmonary œdema was the inevitable result. Its occurrence in the human cadaver depends hence, on the earlier death of the left ventricle, while the right ventricle continues a few beats. The very speedy occurrence of œdema of the lungs is explicable by the delicacy and permeability of the pulmonary capillaries, especially under as high a blood-pressure as is produced by paralysis of the left ventricle.

LESIONS OF THE ANTERIOR ROOTS IN DIPHTHERITIC PARALYSIS.—*Gaz. Méd.*, 1877, No. 33. Déjerine examined post mortem three cases of diphtheritic spinal disease in children, in one of whom during life paralysis of almost all the muscles of the body had been observed in addition to the paralysis of the velum palati. In the other two cases a similar condition existed in the muscles of the upper extremities and neck. The anterior roots of the spinal nerves were placed in a one per cent. solution of hyperosmic acid for twenty-four hours, and then examined. In the first and most severe case Déjerine found in most of the nerve fibers the signs of a far advanced parenchymatous neuritis (degeneration). The axis cylinders were gone, the medulla fissured or infiltrated with drops of myeline; the nuclei of the nerve sheaths, as well as those of the intertubular connective tissue, were multi-

plied. Similar changes were observed in some peripheral nerves taken from the muscles; the muscular fibers themselves seemed entirely intact. Similar, though less marked, were the changes observed in the other two cases, in which the paralytic symptoms had been less extensive, and of shorter duration than in the first case. The changes in the nerves resembled those which appear when the nerves for any reason are deprived for a long period of the influence of their trophic centers, and it seems probable, according to Déjerine, that the changes in the peripheral nerves are dependent upon a cellular intra-medullary lesion. He promises the results of the examination of the cord at a future time.

Surgery.

On a Case of Un-united Fracture.—Dr. Max Schüller, of Griefswald. (*Deutsche Medicinishe Wochenschrift*, March 2, 1878.)

Dr. Schüller observes that the employment of antiseptic precautions must materially change the opinions formerly entertained as to the danger of resecting the ends of the fragments in un-united fracture. Hence, of late years, we find this mode of treatment very frequently resorted to, amongst others by Volkmann, Bardeleben, and Langenbeck. The value of this method of treating false joint, as compared with the many others from time to time practiced, is, the author considers, yet to be determined. As a partial solution of the question, Dr. Schüller has published this case.

Frau H., 40 years of age, a healthy vigorous woman, sustained a fracture of the leg from the wheel of a heavily laden wagon passing over it. Gypsum bandages were immediately applied, but, after eight weeks' treatment, no consolidation had taken place, and no formation of callus could be felt. A fresh trial of plaster of Paris bandage was now made, and a three per cent. solution of carbolic acid was injected from a hypodermic syringe near the seat of fracture; a plan recommended of late years by Professor Hueter for the treatment of cases of delayed or non-

union. Six months were consumed in various trials, and, at the end, there was not the slightest degree of union. An operation was then decided upon. A careful examination showed a marked interval between the fragments, so that pegging was not thought suitable. An incision, two and a half inches long, was therefore made, the seat of fracture exposed, and the periosteum raised from the ends of the bone, which were rounded, while between them passed the tendinous termination of the tibialis anticus muscle. There was not a trace of bone-proliferation. The muscle was now restored to its proper position, and the ends of the bones cut off, partly with the saw, and partly with the chisel, to the extent of a centimetre from each. After forcible traction, the fresh surfaces of bone could be accurately adjusted together, the fibrous connection of the broken ends of the fibula being divided simply with the knife, but the bone not otherwise interfered with. As the fragments of the tibia showed no tendency to separate, ivory pegging, or silver-wire suture, was not employed, but the carefully preserved periosteum was accurately united by fine cat-gut sutures, a small opening only being left to allow a fine drainage-tube to pass between the bones. Another and larger drain was passed outside the periosteum, and through a counter-opening made in the calf. The skin-wound was now sutured with cat-gut, the limb enveloped with salicylized jute, and a gypsum bandage, reaching over the knee, was applied. The whole operation was performed with strict antiseptic precautions. Except the day afterwards, when the temperature rose to 38.5° C. (101.3° F.), there was never any fever. The whole dressing, plaster of Paris bandage included, was changed every few days at first; then a window was made in the plaster, and the dressings of the wound alone renewed. The external wound healed by first intention, but a slight discharge continued for a long time from the interior. A small fragment of bone subsequently exfoliated, and then immediate and thorough healing followed; and, at the end of four months, complete consolidation had taken place, in good position, and with a shortening of only half a centimetre at the outside. The author preserved the periosteum in this case with the greatest care, believing it has the chief part in the act of union, the endosteum somewhat less, and the bone-

substance proper very little. The plan of pegging, he considers, has its principal result in fixing the fragments. He believes little in its power of exciting proliferation of bone when employed under antiseptic precautions, which accounts, in his opinion, for several recent failures of this method. In cases, therefore, where resection of the ends of the bone is indicated, he would perform the operation subperiosteally, accurately unite the margins of the divided periosteum, and only use pegs where necessary to maintain the fragments in a position, and at rest.

TRANSPLANTATION OF THE URETHRA TO THE PERINEUM.—In the *Archiv. für Heilkunde*, Heft vi., 1877, a case of cancer of the penis is reported, in which Professor Theirsch amputated that organ. After amputating at about the level of the pubic bone, and checking the hæmorrhage, a catheter was introduced into the urethra; an incision was then made along the raphé of the scrotum to the perineum, thus dividing the scrotum into two equal parts and exposing the urethra, the anterior termination of which was loosened from its attachment in the pubic arch for a distance of about four-fifths of an inch. A small incision was now made in the perineum between the posterior extremity of the scrotal wound and the anus, an inch and a half in front of the latter; the urethra was drawn through this opening, and its walls fastened in the borders of the wound. The operation was made under Lister's spray. Fourteen months after the operation the patient reported himself as perfectly free from all inconveniences. He could project his urine forward at angle of 45 deg. from the vertical line.

EXOPHTHALMIC GOITRE CURED BY GALVANIZATION OF THE SYMPATHETIC.—Dr. Ancona (*Giornale Veneto delle Scienze Mediche*) relates the case of a young girl aged 19, of habitually bad health, who suffered from exophthalmos and goitre. She was emaciated, weak, suffered from diarrhœa and frequent flushings of the face; was irritable and capricious, and unceasingly dyspeptic. Dr. Ancona proposed galvanization of the first cervical ganglia of the sympathetic. The poles of a Stöhrer's battery were applied on each side of the neck, behind the angle of the

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jaw, pressing backwards the sterno-mastoid muscles. A current of ten elements was passed for a time varying from three to five minutes. After a few days, the circuit was frequently interrupted. The physiological effects observed were the following: dilatation of the pupil each time the circuit was closed, more marked on the side of the negative pole; slight contractions of the sterno-mastoid; scalorrhœa, with a taste of copper in the mouth; sometimes giddiness. At the end of five months, a hundred electrizations had been applied and very well borne. Arsenical treatment was added. From the beginning of the application of electricity, there was notable amelioration, and at the end of five months the state of the patient was very satisfactory. Her weight had increased by 30 lbs. Her face and mucous membranes resumed their normal color; her eyelids regained their mobility; the thyroid gland diminished in volume; the arterial pulsation ceased to be visible; the impulse of the heart became regular; the pulse fell; menstruation became regular; digestion was restored; and strength returned.

TREATMENT OF VAGINISMUS.—Dr. F. Weber, of St. Petersburg (*Allg. Med. Central Zeitung*, Nos. 1 and 2, 1878, and *Allg. Wien. Med. Zeitung*, January 22, 1878,) thinks that the treatment of vaginismus should depend upon its cause, and should not be the same in all cases. Some local cause should always be sought for, and both local and general treatment are advisable.

The most common causes of the affection, he thinks, are a rigid condition of the hymen, gonorrhœal or catarrhal inflammation of the vagina, and also cicatrices, ulceration, or excoriation of the vulva and outer parts of the vagina.

Organic contraction should be treated by methodical dilatation, at first with compressed sponge, and subsequently with Fergusson's specula, the size of which should be gradually increased. An ointment of belladonna is of great service at the same time. Inflammation of the vagina should be treated with cloths, wet with a solution of sugar of lead, injections with or without opium, and belladonna suppositories. In the later stages, cauterization, with a solution of nitrate of silver, gives excellent results. This is especially serviceable when there are excoriations. Warm hip

baths lessen the irritability of the nerves, and are of service. In addition to the local treatment, tonics and nervines should be used—especially bromide of potassium, iron and valerian. When no local trouble is to be found, and the sufferings of the patient are very severe, division of the nervus pudendus, as recommended by Simpson and Sims, should be practiced. The removal of the hymen itself or the myrtiform caruncle, Weber has never found necessary (though it has been repeatedly done by Sims and others).

ORTHOPÆDIC TREATMENT OF PARALYSIS OF OCULAR MUSCLES. (*Wien. Med. Wochenschrift*, No. 13, 1878.)

The following method based on the principle of passive move ments, is recommended by Michel. (klin. Monatsbl, f. Augenheilk, Nov., 1877):

The conjunctiva is seized over the insertion of the paralyzed muscle with an ordinary forceps, and the eye is pulled in the direction of that muscle, so as to imitate and in fact exceed the contraction of the paralyzed muscle. This is repeated two to three times. There is an immediate gain in strength of the muscle, which however, is not permanent. Nevertheless the duration of treatment is shortened and the contracture of the antagonistic muscle is avoided.

TREATMENT OF VARICOSE VEINS.—(*Mittheil. des Wiener Med. Doctoren-Collegiums*, No. 8, 1878.) In one of the numbers of the *Transactions* of the Wiener Medicinshe Doctoren-Collegiums for the latter part of 1877, Dr. Englisch published a paper on the treatment of hernia by injections of alcohol. The favorable results which he obtained from this mode of treatment in hernia induced him, he states, to test its value as a method of radically curing varicose veins. He states that this method for the radical cure of varices has the advantage over all others that it is perfectly harmless.

The method which Dr. Englisch pursues is very simple. The vein and a fold of the skin are caught up between the thumb and finger, and a needle of a Pravaz syringe is inserted in such a way that its point shall be immediately behind the vein. The contents of the syringe, from one to one and a half cubic centimetres

of a fifty per cent. sample of alcohol, are then discharged in the immediate neighborhood of the vein. A small knot forms at the point of injection, and very often there is a momentary appearance of contraction in the veins. On the third day, there will be a considerable infiltration at the point of injection, which differs according to the irritability of different persons. In individuals who were very irritable, there was considerable redness produced, and in four or five cases suppuration ensued. The suppuration was only in the *neighborhood* of the vein, however; the vessel itself remained sound and healthy. The abscesses were as large as a bean, but gave rise to no trouble whatever. In none of Dr. E's cases was there any rise of temperature, though he examined carefully with reference to this point. When the infiltration softened and the swelling subsided, a change in the veins themselves became apparent. They were much smaller and harder at the point of injection and its vicinity, and felt like hard cords; and at the sides of these cords very well-marked grooves could be felt.

In a few of these cases, a single injection sufficed to cause a complete cure; but in the majority of cases, Dr. E. found it necessary to make three or four, and in one person he made as many as ten injections in both limbs.

The results are most favorable when the affected veins are spread out in the form of a plexus, and the cases are most difficult to treat when the varicose vessels give off a number of branches. The subjective troubles in consequence of the operation are very slight, and only require rest of the limbs.

The duration of treatment varies. Even in those cases where a complete cure cannot be obtained, the efficiency of the palliative means of treatment will be rendered much greater.

The mode of treatment is perfectly harmless, and if it does not succeed, the other procedures may then be resorted to.

ANTISEPTIC TREATMENT OF BURNS.—Bush. (*Centralbl. f. Chir.*, No. 14, 1878.)

At the last congress of German surgeons, W. Bush detailed his treatment of burns with Lister's antiseptic method. The burn is cleansed with a solution of carbolic acid; during the time of bandaging carbolic acid spray is constantly kept up. The

wounds are thereupon covered with an ointment of boric acid spread on linen. Upon this an ordinary Lister's dressing is placed. If the burns are not very extensive, the bandage can remain in place for a considerable time. The growth of granulations is thus checked; and but little pus is produced while the cicatrization proceeds rapidly. The subsequent cicatrix is smooth and elastic. (Lister himself uses a similar method.)

Dermatology.

Treatment of Pityriasis Capitis and of Alopecia.—Malassez (*Journal de Médecine*, Dec., 1877).

The facts placed beyond doubt by Malassez in regard to this affection, are, first the constant existence and very great abundance of a certain species of fungus, and second, the absence of this fungus, or at least, its great rarity where there is no pityriasis, or where it no longer exists, as well as in other squamous affections, such as eczema, psoriasis, and ichthyosis. This fungus consists solely of spores. They are found in the corneous layer of the epidermis, where they form horizontal layers or veritable heaps between the diverse layers of this horny portion. At the same time a vesicular alteration of the epidermic cells, already described by Ranvier, is proven.

M. Malassez concludes from these facts, that pityriasis results from the invasion of the hairy scalp by this fungus. 1st. Arriving upon a soil favorable to their development (arthritic subjects) the spores multiply, infilrate themselves into the corneous layer of the epidermis, and there separate into layers. 2d. This invasion produces in the tissues an irritation, a reaction which manifests itself by the vesicular state of the epidermic cells, a new cause of desquamation.

From this double cause, then, external and internal, and from the double mechanism, direct and indirect action, result important practical conclusions as regards treatment. This should be local and general. The local treatment alone will occupy us at present; it should be essentially antiparasitic, and it is necessary in applying it, not to lose sight of the nature and seat of the

parasite. Being a fungus, the parasite may be destroyed by such agents as turpeth mineral, sublimate, etc. This parasite, being situated in the corneous layers of the epidermic layers which are all impregnated with fatty matters, it is necessary to make the parasiticide penetrate them. The following treatment carried out carefully succeeds perfectly.

1st. Every second day combing with a fine comb, and soaping the head with common soap. This removes mechanically the scurf, and removes the fatty matters from the hair, and opens up the retreats of the fungus to the action of the parasiticide. With long-haired persons this is not practicable. Men and children should have their hair cut closely. As we cannot usually ask women and young girls to make a sacrifice of their long hair, frictions with commercial alcohol should take the place of the soaping.

2d. When the hair is well dried, friction should be made to the scalp with an ointment composed of equal parts of cocoa, butter, castor oil, and oil of sweet almonds, containing one part of turpeth mineral to fifteen of the excipient. Only small quantities should be made at a time, as it soon becomes rancid. In place of this, benzoated lard may be employed as the excipient, though the author prefers the vegetable fats mentioned. Great care should be used in applying the ointment so as to reach every spot of the scalp, and it should be well rubbed in. Large quantities should be used, and frictions made every day. After a week or two of treatment, combing and cleansing of the scalp may be made less frequently, say twice a week, and later but once a week. The ointment may also be applied but two or three times a week, though it is well to continue its use for some time. Amelioration comes soon, complete cure less so, and requires considerable persistence in treatment.

For pityriasis of the beard the ointment would be inconvenient, and may be replaced by alcoholic solutions of corrosive sublimate one part to 500 or 1,000, according to circumstances. A small brush (a soft tooth brush is useful) is saturated with this solution, and rubbed into a small portion of the affected skin at a time, then wet again and applied to a new spot. After all is done, wait a few moments, and then wipe off any excess of liquid on the beard.

The combs and brushes used, should be frequently cleaned with potash, or they will become new sources of contagion.

The alopecia. which succeeds pityriasis, results from the formation of an epidermic plug in the upper portion of the hair follicle, this being an obstacle to the normal exit of the hair. Irritation follows in the deeper portion of the follicle, then hypertrophy of the walls, and finally, obliteration of the hair follicle. After a time, only a fibrous cord is left in its place. Treatment at that stage is of course useless. But during the developmental stage one may hope to arrest the disease, and even to make the hairs more vigorous :

1st. By unplugging the orifices of the hair follicles; 2d. By curing the pityriasis, which affects the superficial regions; 3d. By counteracting the irritation in the deeper parts. For the last condition we may add to the turpeth mineral ointment, from two to four parts of tincture of cantharidis to thirty of the ointment. As the required effect is produced slowly, the cantharidis should be continued long after the pityriasis has disappeared. A weaker ointment should then be used without the turpeth mineral, or but very little of it, say half a part to one part of the mineral and thirty of the excipient, the cantharidis remaining the same. Gallic acid ointment is also useful in these cases. The patient should be informed that friction will at first cause an increased fall of the hair, but it is only temporary, and the diseased and loosened hairs will be replaced by more vigorous ones.

PITYRIASIS PILARIS.—*Journal de Médecine*, Dec., 1878.

M. Richard, in a thesis just published, describes this rare and interesting affection. The principal elements of this very remarkable work were drawn from the service of M. Besnier, whose interne Richard was, and he proves that this affection attacks the entire epidermic system, following it into its ramifications to the bottom of the sebaceous glands and hair follicles, affecting the nails, the hairs, and perhaps even the sudoriparous glands.

Pityriasis pilaris, whatever may be its mode of origin, is characterized by the presence of large red patches covered with scales, patches often large enough to cover the entire trunk without the slightest interval of sound skin. If the patient be examined

closely then, there will be seen on other parts of the body small eminences traversed by a hair, and in the palms of the hands, and in certain cases, even the soles of the feet, there are seen large scales; the nails are hypertrophied, and the face is covered with a sebaceous coating. All these lesions are symmetrical. These large red surfaces are a little rough to the touch, but become smooth when freed of their scales, which is easily done. This surface presents neither crusts nor vesicles, nor the slightest moisture. The trunk is most often the seat of this desquamation, and it never descends lower than the thighs. Besides, upon the hairy regions, there is observed another lesion which characterizes pityriasis pilaris; it is the epidermic cones. These pathological productions occupy the regions covered with hairs, except the scalp, the beard, and the pubis. They are especially distinct on backs of the fingers and extend from them to the forearm. These epidermic eminences exist exclusively around the hairs. They consist of two portions, the one intradermic, the part toward the base of the follicle; the other, extradermic, with truncated summit, which looks toward the free extremity of the hair. They are sometimes traversed by a hair, surrounding it like a ring on the finger. Sometimes, on the contrary, they cover the hair, imprisoning it and preventing its escape. If then the little eminence be picked off, the hair set at liberty unrolls itself and straightens. These little eminences give to the skin the appearance of "goose-flesh," and to the hand the sensation of a rasp. These cones thus constituted, do not occupy the regions covered by the pityriasic disquamation. They occupy the hairy regions of the hand. They stop at the sides, and in the palm is often seen a lesion of a different kind; it consists in the presence of large epidermic scales which give a horny appearance to the region. The nails themselves are sometimes hypertrophied. At the same time, the hairs are generally diseased and fall in part. To these local phenomena there are few general phenomena to add. These consist solely in certain troubles of sensibility, and sometimes itching. The affection is essentially a chronic one.

These are very briefly the principal characters of pityriasis pilaris which permit it to be distinguished from ichthyosis pilaris which is nearly always congenital, from psoriasis, and from pity

riasis rubra which differs from it, especially in the absence of the epidermic cones. Unfortunately treatment seems to be of little use. M. Richard advises topical applications of glycerole of starch, to which he adds ten per cent. of cherry laurel water to mask the odor of the glycerine and to diminish itching. At the same time alkaline and starch baths may be tried, and Vichy water, Bazin's alkaline syrup, or the arsenate of sodium.

QUINIA-EXANTHEMA.—Kœbner (*Vierteljahresschrift f. Dermatolog. und Syphil.* 1877, No. 4).

In May of last year, we gave the notes of a case of a scarlatina-like eruption following the administration of quinine. Dr. K. observed two similar cases of idiosyncrasy. The symptoms are so exactly like those of the case reported last May, that we need not repeat the full history. Suffice it to say that in the first case reported by K., the exanthema first broke out in June, 1876, after 0.225 grammes of quinine had been taken; it lasted a whole week, and the desquamation continued six weeks. In September of the same year, another eruption after 0.15 quinine; desquamation beginning on the fifth day. In November, a third attack after 0.1 quinine; desquamation began on the third day and lasted two weeks. It will be noticed that the duration of the exanthema bore a decided relation to the dose of quinine taken.

THERAPEUTICS.

JABORANDI.—*Pilocarpus Pinnatus* is a drug which invites further study. After the researches of Dr. Ringer and Mr. Martindale, an English pharmacist, there can be no doubt of the powerful diaphoretic and sialogogue properties possessed by it. The secret of its mighty diaphoretic and sialogogue strength undoubtedly exists in its alkaloid, recently discovered by Mr. Gerard, and the most efficient salt of this alkaloid is generally believed to be the nitrate; its price, however, effectually excludes it at present from general use. The price asked for it in New York is about $25 per drachm; but as better and easier methods of eliminating it are discovered, the price will correspondingly decline.

Half a grain of the nitrate is said to produce the effect of a full dose of jaborandi. One drop of the solution of the nitrate (1 grain to 1 ounce) put into the eye will contract the pupil to the size of a pin's head. From a report of some interesting physiological experiments performed on a dog and a rabbit at University College, London, we find that $\frac{1}{10}$ of a grain of the alkaloid produced profuse salivation, which was readily checked by administering $\frac{1}{200}$ of a grain of sulphate of atropine. Mr. Gerard thinks that the best pharmaceutical preparation is the fluid extract. In this city jaborandi has been used with success in one drachm doses, infused in a cup of boiling water, and the whole drunk (without being strained). In a short while it produced an excessive flow of saliva followed by profuse diaphoresis. No nausea followed in the two cases reported by the physician for whom the writer prepared the remedy.

TREATMENT OF BOILS BY ARNICA. — Dr. N. Planat has adopted (*Journal de Thérapeutique*) the use of arnica in all cases of superficial acute inflammation, as boils, angina, erysipelas, etc. He states that arnica cuts short all furuncular eruptions, except those accompanied by diabetes, with remarkable promptness. For external use, he employs a mixture of extract of fresh arnica flowers, ten parts; honey, twenty parts. If this be too liquid, he adds lycopodium. The mixture is applied to the inflamed part and covered with oiled silk. Equally good results will be obtained in the same cases by the internal administration of tincture of arnica in doses of twenty-five to thirty drops every two hours. M. Planat adds that the extinction of the furuncular eruption is so rapid that it seems impossible to deny a specific elective action.

VASELINE AS EXCIPIENT. (*Journal de Médecine et de Chirurgie pratique.*)—Vaseline is an excellent excipient for: potassium iodide, tannin, chloral hydrate, chloroform, camphor, morphine, atropine, iodine and phosphorus. The vaseline does not become rancid and the alkaloids do not decompose.

As it contains no fat, it cannot be used where chemical combination is desired to form oleates.

Medical News.

THE *Metric System of Weights and Measures* is now officially introduced into the United States Marine Hospital service. As it is quite likely to be adopted, sooner or later, by the profession throughout the country, the following very simple rules and suggestions contained in circular No. 3, series 1878, of the Superintendent Surgeon-General, U. S. M. H. S., for the ready conversion of the present weights and measures into their respective equivalent in metric terms may be of some interest to our readers.

RULES FOR CONVERTING TERMS OF THE UNITED STATES APOTHECARIES' WEIGHTS AND MEASURES INTO THEIR RESPECTIVE EQUIVALENTS IN TERMS OF THE METRIC SYSTEM.

1.—To express quantities by weight of the Apothecaries' system in metric terms, or to write medical prescriptions in metric weights.

Rule A.—Reduce each quantity to grains; then divide the number by 10 (or move the decimal point one place to the left), *and from the quotient subtract one-third.* The remainder is in each case the number of grammes representing (nearly) the same quantity. Or,

Rule B.—Reduce each quantity to drachms, and multiply the number by 4. The product is in each case the number of grammes representing (nearly) the same quantity. Or,

Rule C.—Reduce each quantity to ounces, and multiply the number by 32. The product is in each case the number of grammes representing (nearly) the same quantity.

2.—To express quantities by measure of the Apothecaries' system in metric terms, or to write medical prescriptions in metric cubic measures.

Rule D.—Reduce each quantity to minims, then divide the number by 10 (or move the decimal point one place to the left),

and from the quotient subtract one-third. The remainder is in each case the number of cubic centimeters representing (nearly) the same quantity. Or,

Rule E.—Reduce each quantity to fluid drachms, and multiply the number by 4. The product is in each case the number of cubic centimeters representing (nearly) the same quantity. Or,

Rule F.—Reduce each quantity to fluid ounces, and multiply the number by 32. The product is in each case the number of cubic centimeters representing (nearly) the same quantity.

The following prescription—

℞: Potassii Bromidi, ℥i.
Elix. Aurantii, fl. ℥viij.
Mix—

would, in metric terms, be written:

℞: Potassii Bromidi, 32 Gm.
Elix. Aurantii, 250 C. C.
Mix.

Or, in more finished decimal manner:

℞: Potassii Bromidi, 30 Gm.
Elix. Aurantii, 250 C. C.
Mix.

The exact equivalents of the grain, drachm, and ounce (troy), in grammes; of the gramme in grains; of the minim, fluid drachm, and fluid ounce in cubic centimeters, and of the cubic centimeter in minims are as follows:

1 grain, troy, is equal to 0.065— grammes.
1 drachm, troy, is equal to 3.888— grammes.
1 ounce, troy, is equal to 31.103+grammes.
1 gramme is equal to 15.43234874 grains, troy.—*Prof. Miller.*
(1 avoirdupois pound is equal to 453.592+grammes.)
(1 avoirdupois ounce is equal to 28.350+grammes.)
1 minim is equal to 0.062— cubic centimeters.
1 fluid drachm is equal to 3.697— cubic centimeters.
1 fluid ounce is equal to 29.573— cubic centimeters.

In preparing prescriptions the following approximate equivalents may be substituted: 1 grain, 0.06 Gm.; 1 drachm, 4 Gm.; 1 ounce, 30 Gm.; 1 minim, 0.06 C. C.; 1 fluid drachm, 4 C. C.; 1 fluid ounce, 30 C. C.—

Items.

HOMŒOPATHIC "SOUL MEDICINE."

"In allopathy the soul is nowhere; in homœopathy the state of the soul or mind is a *sine quâ non*.

"Allopathy has no means of affecting the soul or mind, except those of a moral kind; whereas homœopathic medicines act upon the spirit or soul of man, and through it and by means of it, and with a certainty which is as remarkable as it is true.

"By way of illustrating the power of homœopathic medicines over the mind and its affections, I shall give the following example: A favorite cat of my own had kittens; all were drowned but two; then one was given away, and ultimately the remaining one was given to a friend. The mother of the kittens became *inconsolable*, and went all over the house, mourning her loss in unmistakable *tones of grief*, for five days and nights, making night hideous with her cries. One globule of *Ignatia* cured her in half an hour, as she never cried again."—(Skinner's "Diseases of Women," p. 27; Porter & Coates, Phila. *Phil. Med. Times*, June 8, 1878.)

THE following named physicians constitute the newly appointed Medical Board of the Cook County Hospital: Drs. McWilliams, Lee, Jacobson, Hessert, Guerin, Baxter, Fenger, Ross, Gunn, Parkes, Quine, Bevan and Isham.

IF the end of the uterus appears as hard as the end of your nose, pregnancy should exist. If it appears as soft as your lips, the uterus probably contains a fœtus.—W. GOODELL.

Obituary Record.

C. A. Wunderlich.—Sept. 25, 1877, æt. 62. Dr. Wunderlich was professor in the University of Leipzig, and best known by his work on "Temperature in Disease."

M. Elie Gintrac.—Dec., 1877, æt. 86. The most important of his works is a "Theoretical and Clinical Course on Pathology and Medical Therapeutics."

Jean Bapt. Philip Barth.—On the 3rd Dec., 1877, at Paris. æt. 72. His principal work was on auscultation and percussion, written in conjunction with M. Henri Pioger.

Dr. Wm. Stokes, the eminent Irish physician died in Dublin, Jan. 7, 1878, æt. 74.

Ed. H. Clarke, M. D.—In Boston, Nov. 30, 1877, æt. 57. Dr. Clarke was Professor of Materia Medica in Harvard College, and held an enviable position in Boston as consulting physician.

Dr. James Blundell.—At London, Jan. 15, 1878, æt. 87. Dr. Blundell was formerly Professor of Obstetrics at Guy's Hospital.

Fleetwood Churchill, M. D.—In Ireland, Jan. 31, 1878, æt. 70. Dr. Churchill was well known by his works, "Theory and Practice of Midwifery," "Diseases of Women, and "Diseases of Children."

ANNOUNCEMENTS FOR THE MONTH.

SOCIETY MEETINGS.

Chicago Medical Society—Mondays, July 8 and 22.

Chicago Society of Physicians and Surgeons—Mondays, July 1 and 15.

CLINICS.

MONDAY.

Eye and Ear Infirmary—2 to 4 p. m., by Prof. Holmes and Dr. Hotz—2 p. m., Prof. Jones.

Mercy Hospital—2 to 3 p. m. Surgical, by Prof. Andrews.

Rush Medical College—2:30 p. m. Dermatological and Venereal, by Dr. Hyde.

County Hospital—8 p. m. Necropsy, by Dr. Danforth.

Woman's Medical College—3 p. m. Surgical, by Prof. Owens.

TUESDAY.

County Hospital—1:30 p. m. Medical, by Prof. Lyman; 2:30 p. m. Surgical, by Prof. Parkes.

Mercy Hospital—2 p. m. Medical, by Prof. Hollister.

Eye and Ear Infirmary—2 p. m. Prof. Jones.

WEDNESDAY.

County Hospital—2 p. m. Gynecological, by Dr. Bridge. 3 p. m. Ophthalmological, by Dr. Montgomery.

Mercy Hospital—2 p. m. Eye and Ear, by Prof. Jones.

Rush Medical College—4 p. m. Diseases of the Chest, by Dr. E. Fletcher Ingals.

THURSDAY.

Mercy Hospital—2 p. m. Medical, by Prof. Davis.

Rush Medical College—1:30 p. m. Neurological, by Prof. Lyman.

Eye and Ear Infirmary—2 to 4 p. m. Operations by Prof. Holmes and Dr. Hotz.

FRIDAY.

Mercy Hospital—2 p. m. Medical, by Prof. Davis.

County Hospital—1:30 p. m. Medical, by Prof. Quine; 2:30 p. m., Surgical, by Prof. Powell.

Woman's Medical College—10 p. m. Ophthalmological, by Dr. Montgomery.

SATURDAY.

Rush Medical College—2 p. m. Surgical, Prof. Gunn.

Chicago Medical College—2 p. m. Surgical, by Prof. Andrews and Isham; 3 p. m., Diseases of the Chest, by Prof. Johnson.

Woman's Medical College—12 m. Gynecological, by Prof. Fitch; 3 p. m. Dermatological, Dr. Maynard.

Special Clinics daily, from 2 to 4 p. m., at the South Side Dispensary, and at the Central Free Dispensary.

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To our Readers and Correspondents.

Beginning with Vol. XXXVII., July, 1878, the CHICAGO MEDICAL JOURNAL AND EXAMINER prints all records of length and weight in terms of the Metric System, and all records of temperature in degrees of the Centigrade Scale. The Metric System, legalized in the United States and Great Britain, is extensively or exclusively employed by other civilized nations, and has thus become an essential part of the international language of science. It is recommended for adoption to the profession in this country by the American Medical Association and other scientific bodies. To-day no physician can afford to be ignorant of its value, its simplicity and the meaning of its terms.

The subjoined tables and scales, which have been kindly prepared for us by Prof. W. S. Haines, will be continuously reproduced in subsequent numbers of this journal, for the ready reference of our readers and correspondents.

Metric Measures of Length.

Millimeter	0.001 of a Meter	0.03937	inches.
Centimeter	0.01 " "	0.39370	"
Decimeter	0.1 " "	3.93707	"
Meter	**1.**	**Meter**	**39.37079** "
Decameter	10.	Meters	393.70790 "
Hectometer	100.	"	3937.07900 "
Kilometer	1000.	"	39370.79000 "

Metrical Weights.

Milligram	0.001 of a Gram	0.015	grains.
Centigram	0.01 " "	0.154	"
Decigram	0.1 " "	1.543	"
Gram	**1.**	**Gram**	**15.432** "
Decagram	10.	Grams	154.323 "
Hectogram	100.	"	1543.234 "
Kilogram	1000.	"	15434.348 "

☞ The United States "nickel" five cent piece weighs five grams, and is two centimeters in diameter.

Approximate Equivalent of Metrical Weights.

For Rapid Reference.

Milligrams.	*Grains.*	*Decigrams.*	*Grains.*
1 (written 0.001 or |001)*..	1/65	1 (written 0.1 or |1).....	1 1/2
2.....	1/32	2.....	3
3.....	1/22	3.....	4 1/2
4.....	1/16	4.....	6
5.....	1/13	5.....	7 1/2
6.....	1/11	6.....	9
7.....	1/9	7.....	11
8.....	1/8	8.....	12 1/2
9.....	1/7	9.....	14

Centigrams.	*Grains.*	*Grams.*	*Grains.*
1 (written 0.01 or |01).....	1/6	1 (written 1. or |1).....	15
2.....	1/3	2.....	30
3.....	6/13	3.....	46
4.....	7/11	4.....	61
5.....	3/4	5.....	77
6.....	9/10	6.....	92
7.....	1	7.....	108
8.....	1 1/4	8.....	123
9.....	1 1/3	9.....	139

A Kilogram—2 1/5 lbs. Avoirdupois.

* The decimal *line* instead of points makes errors impossible.

Metric Fluid Measures.

In prescription writing, fluids are usually measured in Cubic Centimeters, that is, a volume represented by a cube all of whose sides measure one centimeter. An ordinary back-gammon die is usually about this size. One cubic centimeter (written 1 C. C.) = 16.231 minims. It is approximately regarded as one fourth of a fluid drachm.

Approximate Equivalents of Cubic Centimeter.

0.001	C. C.	=	1/65	minim.
0.01	"	=	1/6	"
0.1	"	=	1½	"
1.	C. C.	=	15	minim.
4.	"	=	1	fluid drachm.
16.	"	=	4	fluid drachms.
32.	"	=	1	ounce.

1000 C. C. (usually known as a **Liter**) is a trifle more than one quart, wine measure.

The following prescription—

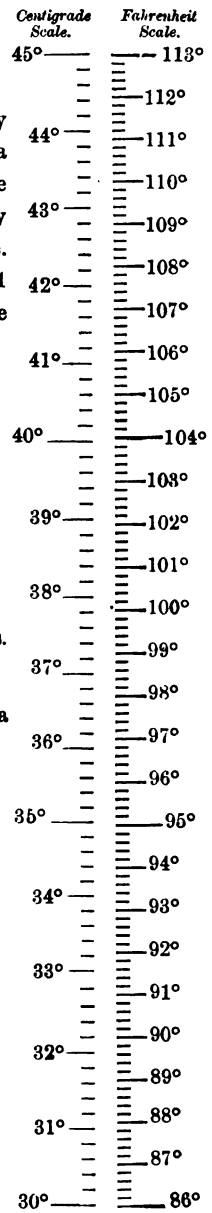
R: Potassii bromidi, ℥i.
Elixir aurantii, fl., ℥viij.
M.

Would, in metric terms, be written:

Potassic bromide, 32 Gm.
Orange elixir, 250 C. C.
Mix.

Or, in more finished decimal manner:

Potassic bromide, 30 Gm.
Orange elixir, 250 C. C.
Mix.



Selected.

THE METRIC SYSTEM IN A NUT-SHELL.

"Universality, Uniformity, Precision, Significance, Brevity and Completeness. A system of weights and measures born of philosophy rather than of chance."—*Charles Sumner.*

By Edward Wigglesworth, M. D.

"Washington, May 3.—Surgeon-General Woodworth, of the U. S. Marine Hosp. Service, has issued a circular, with the approval of Secretary Sherman, requiring medical officers of the Marine Hosp. Service to make use hereafter for all official, medical and pharmaceutical purposes, of the metric system of weights and measures, which had already, under the act of July 28, 1866, been adopted by this service for the purveying of medical supplies."—*Boston Daily Advertiser, May* 4, 1878.

The metric system is already *legalized* in both America and England. The only question now is, which of the two, the most progressive or the most conservative nation on earth, shall be the first to definitely and finally adopt it as an *exclusive* system? [N.B.—England was 400 years behind the continent in adopting our present arithmetic.] Russia has already taken the preliminary steps towards its final adoption. The rest of the civilized world long since made the system obligatory, in whole or in part, except that, in Sweden alone, its obligatory use is to date from a period in the future, 1889.

Now, what is this metric system? Metric, is from the Greek word "metron," a measure, spelled with Epsilon (e short) and, therefore, pronounced mĕt-ric.

The meter (measure) is, practically, a fixed quantity, namely,

the ten millionth part of the earth's quadrant from the Equator to the North Pole. With the meter everything can be *measured*, for it is itself the unit of length; a cube, the edge of which is the tenth of a meter, is the unit of capacity (liter) and the weight of a cube of rain water, at its extreme contraction, the edge of which cube is a hundreth of a meter, is the unit of weight (gram).

It is the gram alone which concerns physicians, for, in the metric system, *everything is best prescribed and dispensed by weight alone;* numbers upon a prescription paper being regarded by the pharmacist as representing grams, unless the contrary is expressly stated. The fractions are always decimal.

The table is easily learned. It consists of six words, as prefixes, whether we deal with grams, liters, or meters. These are: Deci for tenth, centi for hundreth, milli for thousandth; deka for ten, hekto for hundred, kilo for thousand. Having these few words, the terms of Troy, Avoirdupois, and Apothecaries' weight, and of liquid measure, may be relegated to the limbo of pounds sterling, shillings, four-pence-ha'pennies, and farthings. As we say, dime, cent, mill, so we say decigram, centigram, milligram. These prefixes are Latin, and *diminish* the value. Deka, hekto, and kilo are Greek and *increase* the value. The mnemonic is G I L D, *i. e.*, Greek increases, Latin decreases. Deka occurs in the English word decade; hekto in hecatomb; kilo in chiliad.

"Being accustomed to the words mill, cent and dime, we shall find the words 'milligram,' 'centigram,' and 'decigram' quite as simple and easy to pronounce as our words 'pennyweight-troy,' 'hundrethweight-avoirdupois,' 'scruple-apothecaries,' etc., notwithstanding the assertion to the contrary of those who grieve to give up the 'short and sharp Anglo-Saxon words, used in our present *familiar* old tables of weights and measures."

Practically, moreover, for physicians, the whole system is reduced to grams and centigrams, just as, in money, to dollars and cents. On the right side of the prescription paper draw a perpendicular line from top to bottom. This decimal *line* takes the place of all the decimal *points*, and obviates the possibility of mistakes. This is the way dollars and cents are separated on

business papers. Additional security is gained by writing the decimal fraction (centigrams) of half-size and raised above the line (of grams,) since it represents a numerator of which the denominator 100 is omitted. To make assurance doubly sure, "grams" may be written over the integer-column of figures, and, if wished, the word "decimals" over the decimal column.

Now, what is a gram, or rather, the values, metrically expressed, of our present awkward weights?

	Prussian.	Practical.	Precise.
Grain I =	0.06	0.06	0.065
℈ I =	1.25	1.25	1.29
ʒ I =	3.75	4.0	3.89
℥ I =	30.0	32.0	31.1

The "practical" table alone concerns us. The "Prussian" (by order of the Prussian Ministry, Aug. 29, 1867) is given merely to show that our table is even nearer the actual truth than one which has been proved by actual experience to answer every purpose. The values of the grain and scruple are a little too small. As they are used for powerful drugs this is an error in the right direction. The values of the drachm and ounce are a trifle too large, but the proportions and therefore the ratio of drug to vehicle are preserved.

A prescription written metrically is always proportionate, and whether the pharmacist uses pennyweights, pounds or tons; gills, pecks or chaldrons; pints, gallons or hogsheads, the ratios are preserved, and a teaspoon dose contains the same amount of medicine.

As regards administration, a teaspoon represents five grams, a tablespoon twenty grams; for a teaspoon holds one and one-third fluid drachms, a tablespoon a trifle more than four times as much.

In the metric system *everything is weighed*, thus obviating the difficulties of evaporation, refraction and adhesion, and obtaining more conveniently, more exact results. In our old "systemless system" some fluids were measured. How shall we obtain with weights, the desired bulks of fluids with varying weights? Must we learn the specific gravities of all fluids?

Not at all!

1. Fixed oils, honey, liquid acids and chloroform, must at present be prescribed in our old weights, not measures, according to the pharmacopœia. Here change old weights to metric ones.

2. Not enough chloroform or ether is included in any one prescription to admit of harm arising from the amount contained in a single dose, even were their weights regarded as the same with that of water. Moreover, it is not difficult to remember that ether weighs seven-tenths as much as water, chloroform twice as much as ether.

3. There remain infusions and tinctures, glycerines and syrups. These four are used in bulk as doses, or as solvents or vehicles. The former two may be regarded as identical in weight with water; the latter two as one-third heavier, and when prescribing these we need merely write, by weight, for four-thirds as much as we should write for were we prescribing water, and we obtain an equal bulk. The teaspoon or tablespoon dose will then contain the desired amount of the drugs employed.

Or, simplest of all, we can make any mixture up to any desired bulk by merely directing the druggist to use enough of the vehicle to bring the whole mixture up to the requisite weight for that bulk.

The Metric Bureau, 32 Hawley street, Boston, will furnish metric prescription-blanks to order, to druggists or physicians at four-fifths printer's rates, or any blank can be made sufficiently metric by a perpendicular line at the right, headed *grams*.

TREATMENT OF STRANGULATED HERNIA BY ERGOTINE.—Two cases are reported where ergotine was used as a dernier resort before operating. The skin over the tumor was, in each case, washed with an alkaline solution, to facilitate absorption, and pure ergotine was then rubbed in over it every two hours, while it was at the same time exhibited internally. After a few hours the distressing symptoms were relieved, and the hernia either subsided or was easily reduced.—*Le Bordeaux Médical.*

Original Lectures.

THE FUNCTION OF THE SEMI-CIRCULAR CANALS.

A Lecture delivered at the Chicago Medical College.

By H. Gradle,

Lecturer on Physiology.

While studying the perception of sounds, we found in the cochlea an apparatus answering all requirements, which the theory of acoustics demands for the accomplishment of that purpose. There remains for consideration the other portion of the labyrinth—the utricle and semi-circular canals.

What rôle these structures play in the perception of sound, we are unable to say; neither reasoning from physical premises nor experimental data justify the assertion that they are at all necessary for hearing. In some animals, the cochlea as well as the semi-circular canals can be extirpated separately; while loss of the former results in total deafness, destruction of the latter does not impair audition perceptibly. Still, both the constant occurrence of the semi-circular canals throughout the vertebrate series and their peculiarly complicated structure, lead us to attribute to them some important duty.

With the exception of some of the lowest fishes, where only one (Myxinoids) or two (Petromyzon) rings are found, all vertebrate animals present the same general arrangement of the semi-circular canals. It is also remarkable to observe how little this apparatus varies in actual size amongst the different animals. Three hollow rings, or rather portions of three rings, are joined in such a manner as to communicate with a central hollow

receptacle—the utricle. In the higher animals, in which the inside of the petrous bone consists of spongy tissue, this tissue becomes compact in forming the walls of the labyrinth.

The three rings are arranged in such a manner, that their planes coincide with the three dimensions of space. We have thus one horizontal and two vertical canals. Of the latter, one corresponds to the sagittal plane of the head, and the other to the frontal plane. It seems, therefore, preferable to name the canals according to their position, instead of using the somewhat confusing anatomical nomenclature. The three canals communicate with the cavity of the utricle through five openings; the posterior end of the sagittal and the upper end of the frontal canal unite into one opening. Each canal presents a dilatation at one of its ends, the ampulla; this is situated in front on the horizontal and sagittal canals, below on the frontal canal. Within the bony walls we find an accurate cast, so to speak, of their form in the membranous labyrinth. The latter, however does not fill out the entire cavity enclosed by the bony walls, and is hence in contact with the bony wall at one spot only, leaving a free space between the remainder of its circumference and the lining periosteum. This space containing the so-called perilymph deserves to be considered as a lymphatic space, since Schwalbe proved its continuity with the subdural spaces. The membranous labyrinth may be described as consisting of three coats; an outer fibrous coat continuous with the periosteum, a middle hyaline tunic with villi-like projections into the interior, and lastly an internal lining of pavement epithelium. The epithelium, however, is altered in the ampullæ. In each ampulla we find a ridge, the crista auditiva, and a similar crest exists also in the utricle—the macula auditiva, which is lined with cylindrical epithelium instead of pavement cells. Between the cylinder cells there exist fusiform cells, evidently also of epithelial nature, each surmounted with a single hair, which hair passes as a central axis through the entire cell, and can be shown to be in continuity with a nerve fibre. This is probably the most positive instance of a nerve termination in epithelial cells, of which we are aware. The nerves in question are derived from the vestibular branch of the auditory nerve, which sends one twig to each ampulla, one to the macula, and

one to the sacculus. The interior of the membranous labyrinth contains the endolymph. The otoliths floating in this fluid are limited in their motions by a gelatinous matrix.

Mere anatomical considerations do not inform us of the possible uses of this apparatus; fortunately, however, it is open to experimentation. Some fifty years ago the first experimental results were described by Flourens in a manner not since excelled. The animal mainly employed by Flourens and subsequent observers, was the pigeon in which the semi-circular canals can be easily exposed and experimented upon.

After exposing the bone and removing the external plate, the canals are seen in the midst of the spongy tissue. Care must be taken to avoid hemorrhage from the vessels accompanying the canals; besides, there is danger of wounding the utricle and the aquæductus vestibuli. The latter, very large in this bird, was described by Schklarewsky as the "cavitas mesootica," containing a process of the cerebellum; but this has not been confirmed.

Let us follow the details of a well performed section of the horizontal canal. A mere wound of the bony wall is not followed by the characteristic symptoms which are due to section of the membranous canal. The latter is quite sensitive, its section giving rise to pain. After the operation the bird is seen to swing its head frequently in a horizontal direction, but this is not very noticeable unless the animal is excited. Gradually this tendency ceases. After the lapse of some weeks it is no longer observed.

Another noticeable result is the impairment of walk and flight. The animal does not move in a straight line, especially when frightened will it show movements of *manege*, turning in a circle *towards* the side of the operation. No paresis can be found, but the foot of the operated side is not as steady in its movement as the other. As a matter of difficult explanation, the impairment is sometimes more noticeable in flight, sometimes in walking. It diminishes, however, in the course of time.

When both horizontal canals are divided the result is considerably intensified. The swinging of the head, scarcely noticeable in the former case is now a prominent symptom. At the least excitation, often even without such, the animal will shake its head violently in the horizontal plane, usually slowly and with

wide excursion. But as the excitement increases, the movement often changes to a mere rapid oscillation. The shaking of the head occurs even after extirpation of the cerebral hemispheres; it is prevented, however, by deep narcosis. In the course of a few weeks these movements lose in intensity but they do not disappear as long as the bird survives, which, in some cases has been for many months.

A bilateral operation intensifies also the impairment of walking. On attempting to walk, the bird turns to one, or to the other side in such a manner as to prevent it from reaching its object and even escaping from its pursuer. Although the bird can use its wings, continuous flight has become impossible. When thrown up in the air it describes zigzag curves until it strikes against some object and falls to the ground. Time, however, will materially improve locomotion.

On dividing the vertical canals vomiting often occurs, otherwise the results are similar though not the same as after section of the horizontal canals. If the operation be done on one frontal canal, swinging of the head is at once observed. But the swinging is not in a horizontal direction, but obliquely, corresponding to the plane of the divided canal. Otherwise it resembles the swinging after section of one horizontal canal. The impairment of walk is also slightly different. There is a tendency to turn towards the operated side; besides, however, the animal is in danger of falling over—backwards if the frontal canal be divided —forwards when the operation occurred on the sagittal canal.

An operation on both sides is more indicative of the canals divided, than when it is limited to one side alone. The tendency to somersaults renders the animal more helpless than the movements of *manege* alone. The swinging of the head is always in the plane of the divided canals, with an apparent exception. Section of both sagittal canals, will result in a vertical up and down movement, as well as section of both frontal canals. In the pigeon, however, the vertical canals do not coincide exactly with the planes of the head, but are set at an angle of 20 to 30 degrees. Hence the two sagittal canals are not parallel, but divergent, and the same is true of the two frontal canals. Mechanically, therefore, the left frontal and the right sagittal

canals are really mates (and conversely), and this view is justified by the experiment. On dividing the frontal canal of one side, and the sagittal of the other, the swinging occurs in the oblique direction corresponding to their plane. Finally, on dividing the horizontal and vertical canals, the head describes a figure 8 in swinging, and the highest degree of incoordination is obtained.

We have thus described the constant results of a well-performed section of one or more canals, and you see them illustrated in the birds now before you. But these results are very easily complicated by the consequences of wounding of the utricle or aquæductus vestibuli. While in the former case, the animal, when undisturbed, will show no signs of the operation except the shaking of the head, the mutilation of the utricle or aquæduct betrays itself by an inability to maintain the balance under all conditions. The bird finds it necessary to use its head or beak for support in order to avoid falling. Every movement threatens to overthrow the dizzy animal; it performs a variety of the most incoordinate attempts to retain its equilibrium. As a rule, the pigeon must be fed; it cannot coordinate the movements of its head sufficiently to pick up its food. Nevertheless, the animal has lost none of its skill in cleaning itself; with its beak and its foot it can reach every part of its body with accuracy. The swinging of the head is very violent during this state, but no regular direction is maintained, as after a simple section. Usually the head is kept in a peculiar position, the occiput turned until it reaches almost to the ground, while the beak is turned upward and backward. This is not due to muscular paralysis; on the contrary, it is caused by a contracture, and hence an intense narcosis allows the head to return to its normal position. That this malposition of the head increases the unsteadiness of the animal, was shown by Goltz by suturing the head of normal pigeons to the breast, with the result of producing a similar want of balance. But Goltz claims too much when he tries to account for the incoordination by this contracture of the muscles of the neck. Section of the canals alone seldom gives rise to this contracture, although it does so occasionally after some time, and then quite suddenly. In such cases an extension of an inflammatory process to the cerebellum is usually found.

In mammals, section of the semi-circular canals is quite difficult, on account of their protected position. It has, however, been performed with success by Flourens in very young rabbits. The impairment in walking, the movements of *manege* and the tendency to turn over were met with as in pigeons. The swinging movements, however, pertained more to the muscles of the eye than the head. On the other hand, the experiment will also succeed in frogs. In this animal, the muscular incoordination is noticeable, but the swinging of the head or turning of the eyes is not observed.

Whatever animal be employed, the result of operations on the semi-circular canals is always an appearance of dizziness, which increases with the extent of the lesion. That the term "dizziness" is the proper one can be shown especially on pigeons with extended mutilations. The animal, tumbling with every step it attempts, and performing wild movements to retain its balance, is easily quieted by a gentle support, and all voluntary movements cease when the hand of the observer assists it in maintaining its balance. But the various phenomena will appear clearer to you after studying the appearances of dizziness in man.

A simple way to render yourself dizzy is to whirl around rapidly on one foot. The consequences of this rotation were described in detail over fifty years ago by Peorkinye. Recently, however, such experiments have been repeated with a greater show of accuracy by making use of disks rotated by machinery without jarring, on which the observer sits in a chair. I refer to the experiments performed by the physicist Mach, and independently of him by Mr. Crum Brown.

These observers found that with closed eyes, and on a smoothly running apparatus, rotation around a vertical axis is at once perceived. They could recognize besides the direction, rapidity and approximately the angular extent of the turning. A perfectly uniform rotation, however, soon ceases to be perceptible, and the observer believes himself at rest. But as soon now as the actual rotation ceases, a feeling of turning in the opposite direction is experienced. If the apparatus had been revolving from *left to right*, the observer, after the apparatus had come to a standstill, believes himself turning from *right to left;* and this impression

continues some time, according to the rapidity of the original rotation. That the perception of the rotation, as well as the after-impression, if we choose to call thus the imaginary rotation, is obtained through some sensory apparatus situated in the head, is shown by two observations. On the one hand, the delicacy with which we perceive the extent and rapidity of the passive rotation varies with the position of the head. Secondly, however, the direction of the apparent rotation changes also with movements of the head. If, while rotating from left to right, the head is inclined horizontally on the right shoulder, the after-impression on coming to rest will be an apparent movement from right to left, *i. e.*, in the direction from the forehead towards the chin of the head inclined laterally. If now the head is raised vertically to its ordinary position, the observer seems to tumble over forwards. In other words, the plane and direction of the apparent rotation have become altered in relation to the body but have not changed in relation to the head.

We can, furthermore, produce a feeling of rotation by passing a galvanic current through the head, and this result is obtained most readily by applying the poles to the mastoid fossæ. These points of application are evidently the most favorable for the passage of the current through the labyrinth and its nerves.

When an apparent or (as Crum Brown calls it) complementary rotation is observed after cessation of actual motion, no disagreeable dizziness is, as a rule, felt, unless the eyes be opened. In the latter case all external objects seem to have a motion in the opposite direction of the original rotation, *i. e.*, in the direction of the complementary rotation. This peculiar *vibratory* motion of external objects is the main cause of the dizziness. A similar dizziness can in fact be produced during absolute rest by moving the eyeball rapidly to and fro with the fingers, when the real motion of the eye (which, however, is not the result of voluntary contraction of the ocular muscles) is falsely interpreted as an apparent motion of external objects.

Motion of external objects, or in other words, their displacement in relation to our body, can be perceived in a two-fold manner, either by the motion of the retinal image or by the ocular movements necessary to retain the retinal image in its original

place. But to distinguish between real motion of external objects and passive motion of our own body is more than a mere visual impression, it is a matter of judgment. During passive rotation objects do not seem to change their place, at least at first. On observing a person revolving around his vertical axis peculiar ocular movements are noticeable. If he turns from left to right, his eyes are seen to turn at the same rate from right to left, so as to maintain their original direction. But the deviation to the left soon becomes excessive and with a sudden rapid jerk the eyes are turned towards the right. Again they wander towards the left as long as possible, when the former movement is repeated. In other words, the eyes are turned slowly against the direction of rotation, but rapidly in that direction. The image of the object gazed upon in the first place is thus retained in its original retinal position, until the eye performs the rapid movement in the direction of the rotation. The ocular movement requisite to maintain the original gaze is correctly interpreted as being necessitated by the bodily rotation. The displacement, however, which the retinal image suffers during the rapid turn in the direction of the bodily motion is ignored, as we habitually disregard all apparent motion of external bodies due to rapid ocular movements. The ocular movements therefore are *compensatory*, enabling us to recognize the real static condition of external objects.

If the passive rotation of the body continues, the ocular muscles become fatigued and the compensatory movements cease. The displacement of retinal images is now interpreted as real motion of external objects. The same result may be obtained at once by directing our eyes steadily towards the finger held immovably during the rotation of the body, when of course compensatory movements are also excluded, and objects seem to move in the opposite direction. The compensatory ocular movements, although recognized by our judgment are by no means voluntary; they occur during blindness as well as when the eyes are closed. In the latter case they may be felt through the closed lids.

When the actual rotation of the body has ceased and the apparent rotation in the opposite direction is observed, the play of the ocular movements is inverted. If the original motion of the

body was towards the right and the apparent rotation towards the left, the eyes are turned during this apparent rotation *slowly* towards the right and whirled *rapidly* to the left. Hence external objects seem to move in the direction of the apparent rotation. Ocular movements of this nature occur also during the feeling of apparent rotation caused by the passage of the galvanic current.

Besides the ocular movements compensatory activity of the muscles of the trunk and limbs is also observed during apparent rotation. If the body is not supported when real rotation ceases, the danger of falling in the direction of the apparent rotation is imminent; the floor seems to cave in, and to guard against this, muscular efforts are made to restore the bodily equilibrium. Exactly this condition is witnessed also when the head is galvanized.

The compensatory movements of the limbs as well as the eyes are in neither case voluntary, but purely reflex in their nature.

In animals, also, compensatory movements occur during rotation, actual and apparent. In the rabbit the movements are mostly ocular, although the muscles of the neck are also called into requisition; but where the mobility of the eye is so limited, as in pigeons, the compensatory movements consist only in deviations of the head. While holding this pigeon with its head forward I shall turn around from left to right. You can notice how its head deviates towards its left side, until it is suddenly jerked to its extreme right, when it again wanders toward the left. What we accomplish by ocular movements the bird obtains through the free mobility of its neck. When the real rotation ceases, an apparent rotation is evidently felt by the animal, but with this slow motion its objective signs are scarcely perceptible. If, however, the animal is whirled around by machinery, its dizziness betrays itself by the very same phenomena as those *which are seen after section of the semi-circular canals.* The pigeon shakes its head laterally, obliquely or vertically, according to the axis, around which it was whirled, and turns around rapidly to one or the other side; the rabbit presents the characteristic oscillations of its eyes, while performing exquisite movements of *manege* or rolling over in somersaults according to the direction of the original motion. *In fact as long as the dizziness persists, the animals cannot be distinguished from the victims of section of*

some of the semi-circular canals. We have called these compensatory movements reflex and the proof can be furnished that one of their starting points is in the labyrinth. If the eyes of a normal pigeon are covered with a cap, the compensatory movements still continue during passive revolution. If, however, the canals and vestibule are extirpated on both sides, no further movements will occur during rotation, when the eyes are closed. (Breuer.) As long as the eyes are open, however, the movements are excited by sight. The importance of the labyrinth is further shown by the results of section of the auditory nerve, or since this is difficult, by extirpation of the vestibule and canals. The ability to maintain the bodily equilibrium is completely destroyed by this operation. On the other hand, excitation of one auditory nerve produces violent ocular movements and bodily rotation in the direction towards the opposite side. (Cyon.)

Pathological accidents present us occasionally with a similar condition in man. We owe to Menière the first description of a state of dizziness, increased by every movement, and attended with involuntary compensatory efforts, which is due to lesions of the semi-circular canals. Often, however, no lesion is found in these structures, but in other parts of the ear. But a mere strong contraction of the tensor tympani muscle will suffice to press the stapes against the oval window, and thus increase the intra-labyrinthine pressure, and necessarily irritate the nerve terminations. The dizziness sometimes caused by washing out the external meatus is probably due to a reflex contraction of this muscle.

Summing up our evidence, we can therefore state that:

1. We are able to perceive the direction, rapidity and angular extent of a passive rotation.

2. The organ for this perception is situated in the head.

3. Reflex compensatory movements of eyes (and other muscles) occur during a passive rotation, for the purpose of maintaining the equilibrium of the body and the correct appreciation of the static condition of external objects.

4. These compensatory movements do not occur when the vestibules and canals are extirpated and the eyes closed.

5. Lesions of the semi-circular canals are followed by

phenomena identical with those seen during the dizziness after a rapid rotation.

In short, we are forced to recognize in the semi-circular canals an organ for the perception of rotatory motion.

We can explain the perception of rotation by a simple physical hypothesis proposed by Breuer. When a vessel containing a fluid is put into motion, the inertia of the fluid has to be overcome before the fluid molecules follow the motion of the vessel. Hence, *when there are no resisting walls*, a temporary current, backward in relation to the motion of the vessel, is established by the inertia of the fluid molecules. This current continues until the internal friction has absorbed the original momentum due to the inertia of the fluid. The semi-circular canals, although not complete rings anatomically, yet contain a circle of fluid, being completed by the utricle. In such a ring-shaped tube a lateral motion can produce no current on account of the resisting walls, but no obstacle exists to a current whenever a rotation occurs in the plane of the ring; in other words, whenever the ring rotates around its imaginary axis. Since the planes of the rings coincide with the three dimensions of space, no rotation of the head can occur, without producing a current of inertia in one or more rings. With a uniform rotation the current speedily exhausts itself, and the fluid moves uniformly with its walls. This agrees with our sensations; a uniform passive rotation soon ceases to be perceptible.

When the motion of the body ceases, a current is produced in the opposite direction, as compared with the direction of the first current. The inertia keeps up the movement of the endolymph in the direction of the original rotation; the wall of the canal, however, is at rest, and hence the relative direction of the current is inverted. This again explains fully the inverted direction of the apparent rotation; for the perception of these currents no more delicate apparatus can be conceived than the fine nervous hairs of the fusiform epithelial cells. The hairs, being bathed by the endolymph, must be deflected by every current, and the impulse of the current is probably heightened by the vibration of otoliths. The structure of the hairs will besides overthrow the validity of an objection on physical grounds. It may be claimed,

that on account of the narrow caliber of the canals, the current of inertia cannot correspond in duration and intensity to the subjective sensation. But the retarded return to the straight position of these delicate hairs can easily account for the prolonged sensation.

Breuer raises the question whether each ampulla can perceive the current in either direction, and attempts to solve it in the positive. He claims, that after extirpation of the apparatus o one side, compensatory movements will still occur in either direction. Moreover he attempted to prove it directly. Opening carefully the bony canal, he pressed on the uninjured membranous canal with some dull object (a piece of paper), thus creating a current in the direction from the canal toward the ampulla. The result was a movement of the head in the plane of the canal and in the direction of the ampulla. On the other hand, when a current in the opposite direction was established by puncturing the membranous canal with a fine needle to permit the exit of the endolymph, a movement of the head took place also in the plane of the canal, but in the direction from the ampulla toward the canal. This difficult experiment however did not succeed often. The result of a *section* of a single canal is somewhat different. The section, in fact, produces not only a current through the exit of the endolymph, but also a considerable tearing of and traction on the membranous canals. In the beginning of the lecture I did not describe minutely the slight movements subsequent to a one-sided operation, but as Flourens stated, and Breuer confirmed, the section of a canal gives rise always to a shaking of the head in the plane of the injured canal, but from the central position toward the normal side. Within some minutes, however, these movements are reversed, and the head is now thrown toward the side of the operation. Breuer suggests that this reversal of the movements may be due to a state of tonus or constant slight stimulation of the normal labyrinth (perhaps from the constant secretion of endolymph). The irritation from the wounding of one canal having abated, the tonus from the other side might now predominate, and hence the reversal of the movements. This reversal in the direction of the shaking of the head does, indeed, not occur when the vestibule and canals of one side have been extir-

pated some time previous to the division of a canal of the other side.

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VOMITING IN PREGNANCY. — Some years ago the author reported some cases of chorea rapidly cured by ether spray. He now resorts to it in treating obstinate cases of this complaint. He uses Richardson's apparatus and directs the spray over the pit of the stomach, and the corresponding level of the spine, continuing it from three to five minutes or longer, and as often as every three hours. In rebellious cases he alternates with chloroform. The treatment is indicated as soon as there is any nausea. —*Gazette des Hôpitaux*, Apr. 20, 1878).

Original Communications.

CONSUMPTION IN THE NORTHWESTERN STATES.

By H. A. Johnson, M. D.

(*A paper read before the American Public Health Association, September*, 1877.)

I propose for discusssion several questions, to each of which I believe an appropriate answer at least is possible.

First. What is the relative frequency of phthisis pulmonalis in the Northwestern States, as compared with the Northeastern States of the Union?

Second. Does phthisis pulmonalis, relatively to other causes of death, become more frequent as population increases in the United States?

Third. What is the ratio of increase, if any, in the two sections of the country mentioned, namely, the North Atlantic States and the Northwestern States?

Fourth. What are the causes that modify the prevalence of this disease in the two sections named, and more especially in the Northwestern States?

In endeavoring to find an answer to the first question, namely, what is the relative frequency of phthisis in the Northwestern States, as compared with the Northeastern States, I have examined: 1st. The reports of the United States census for 1850, 1860 and 1870. 2nd. The reports of the Provost Marshal's office, giving the records of examinations and the causes for exemption from military duty of drafted men in the Northern States during our late civil war. 3rd. The records of the Chicago Board of Health and the sanitary history of Chicago for the last twenty years. 4th. Such other records, private and public, as have been accessible, bearing upon this subject.

As preliminary to the study, I have examined the general death-rate of the country, and of the two sections as determined by the census reports.

From the vital statistics of the United States census, 1850, 1860 and 1870, four classes of facts may be deduced:

1st. The increase or the decrease of the general death-rate of the whole country.

2nd. The increase or the decrease of the death-rate in the two sections which are the special subject of study.

3rd. The death-rate from phthisis in the whole United States and its increase or decrease.

4th. The death-rate from phthisis in the two divisions, as compared to the whole country and to each other, and the increase or decrease of this death-rate.

It is evident that the determination simply of the ratio of deaths from phthisis to all deaths may not give the true relative frequency of this disease as a cause of death—a greater or less mortality from other causes in a given population will modify the percentage of deaths from phthisis to the deaths from all causes, even though the deaths from phthisis may remain the same.

I find from the reports:

1st. That the general death-rate of the country from 1850 to 1870 has been diminished.

In 1850 the death-rate to population was 1.39; in 1860 it was 1.25; in 1870 it was 1.28 per cent. of the population. In 1850 epidemic cholera was present in many of the cities of the United States, and this fact should be considered in estimating the vitality of our population. I think, however, we may reasonably conclude that the general mortality in the United States has diminished during the twenty years.

I have also examined the problem in its relations to the two groups of States, namely, the New England States, New York and New Jersey, which I shall designate the New England or North Atlantic group; and Indiana, Michigan, Illinois, Wisconsin, Iowa and Minnesota, which I shall call the Northwestern group. I find that in both these groups the general death-rate has been diminishing from 1850 to 1870, but that in the Northwestern group the diminution has been greater than in the New

England group. In the Northwestern group it is as 106.1 for 1850 to 100 for 1870. In the New England group it is as 105.1 for 1850 to 100 for 1870, or, in other words, the improvement in the vital condition of the population of the Northwestern States is to that of the Northeastern as 106.1 to 105.1.

How do deaths from consumption compare with these conclusions as to the general death-rate in the whole country and in the two sections?

I find from the census reports:

1st. The deaths from consumption to 100,000 deaths from all causes in the whole United States were: in 1850, 10,376; in 1860, 12,453; in 1870, 14,199.

These figures indicate that phthisis in proportion to other causes of death is increasing in the United States, but they do not absolutely prove that this disease is really more prevalent or more fatal.

I find, however, that the deaths from consumption to 100,000 persons living was for the whole United States, 145.5 in 1850, 151.1 in 1860, 181.3 in 1870.

The proportion of deaths from phthisis to population, as well as to other causes of death, has therefore been increasing in the United States during the twenty years from 1850 to 1870, while, as already stated, the general death-rate of the country from all causes has been diminishing.

Let us examine more closely the valnable tables furnished by the U. S. government, with a view to an answer to the questions as to the death rate from phthisis in the northeastern and northwestern sections of the country, and the increase or decrease in that death rate.

The deaths reported from consumption in the North Atlantic States for 1850 were 251 to 100,000 persons living. In 1860, 225.5. In 1870, 253.75 for 100,000 persons living.

In the Northwestern States the deaths from consumption were in 1850, 111; in 1860, 124.5; in 1870, 134 per 100,000 persons living.

It appears, therefore, that while the general death-rate in both groups of States has been diminishing, the death-rate from consumption has increased in both, and that the increase has been,

for the last twenty years, greater in the Northwestern States than in the North Atlantic States.

This increase in the ratio in the Northwestern States is limited however to the first decade, from 1850 to 1860. From 1850 to 1860 there was absolutely a decrease in the Northeastern group of States of 25.5 per 100,000 living persons, while in the Northwestern group there was an increase of 13.5 per 100,000 living persons. From 1860 to 1870, in the New England group, there was an increase of 28.25 per 100,000 living, and in the Northwestern group, an increase of only 9.5.

I think it quite probable that for 1850 the statistics in the newer Northwestern States were less accurate than in the North Atlantic group of States. Minnesota, for instance, in 1850, is credited with a population of 6,077 persons and only one death from consumption. Iowa, with nearly the same climatic conditions, had a population of 192,214 with 82 deaths from consumption per 100,000 persons living, while the general death rate was 111 per 100,000 living.

In 1860, the death-rate from consumption in the Northeastern States to that of the Northwestern States, was as 181 to 100. In 1870 the ratio was as 190 to 100. I think, therefore, we may reasonably conclude from these data—

1st. That in both groups the general movement of life is towards greater longevity.

2nd. That this movement is more active in the Northwestern States than in the Northeastern States.

3rd. That the death-rate from consumption, however, has increased in both groups.

4th. That for the twenty years the increase has been greater in the Northwestern than in the Northeastern group.

5th. That from 1860 to 1870 the reverse of this was true, the ratio of increase was greater in the Northeastern than in the Northwestern States.

Possible reasons for the decrease in the New England groups and greater increase in the Northwestern from 1850 to 1860, will be suggested when we come to consider the influences that modify the prevalence of the disease in the two sections.

If we examine the two groups of States more particularly, we

find that in the Northeastern group consumption is more prevalent: 1st, along the sea-board; 2nd, along the shores of the lakes Erie and Ontario and the river St. Lawrence and along the Mohawk Valley. This general fact appears both from the census reports and from the Provost Marshal's report. In the Northwestern group the disease is more frequent along the eastern shore of Lake Michigan, the Ohio river and in the Valley of the Mississippi, including the Illinois, Rock, Wisconsin and western branches of the Mississippi, especially in the eastern part of Iowa.

In the Northeastern division we find the disease less prevalent west of the Connecticut river and in eastern and southern New York.

In the Northwestern division the most favored localities are along the western shore of Lake Michigan, and a belt extending southwest from Lake Michigan east of the Illinois down to the Mississippi above and below St. Louis, and the northwest part of Iowa and the whole of Minnesota.

The statistics of the Provost Marshal's office confirm the inference drawn from the census reports as to the general distribution of consumption.

The number of persons examined was half a million.

In the Northeastern States, New York and New Jersey, the ratio rejected on account of consumption per 1,000 examined, was 24.31. In the Northwestern group the ratio was 10.77 per 1,000. These figures deal only with a part of the population between 18 and 45 years of age, the period of life in which consumption is most likely to occur. So far as they indicate the distribution of the disease it seems to be more than twice as frequent in the Northeastern group as in the Northwestern group.

The statistics of the city of Chicago for the last twenty years bear upon the question of increase in the death rate from consumption in the northwest. In 1851 the death-rate from consumption was 12.4 per 10,000. In 1855, 20.2 per 10,000. In 1860, 25.3 per 10,000 persons living. In 1865, 19.5 per 10,000. In 1870, 16 per 10,000. In 1873, 16 per 10,000.

The ratio of deaths from consumption to the population from 1855 to 1873 has not therefore increased, but has decreased.

The proportion of deaths from consumption to all deaths for 22 years from 1852 to 1873 inclusive is 8.8 per cent. During the four years, 1870, 1871, 1872 and 1873, the ratio was 7.05 per cent. During the four years from 1855 to 1858 inclusive, the ratio of deaths from consumption to all deaths was 13 per cent.

During this period the ratio to population was also greater than during preceding years or subsequent to 1860. In 1852, 1854 and 1867, cholera was epidemic in Chicago, and the death-rate of consumption to all deaths was thereby diminished. Excluding these years and the death-rate of consumption to all deaths is 9.12 per cent. for the last four years of the series 7.05 per cent.

The inference from the statistics of this city are substantially in accord with those drawn from reports of the U. S. census. From 1850 to 1860 the death-rate of consumption, both to other causes of death and to the population, quite rapidly increased. From 1860 to 1870 the death-rate from this disease diminished both relatively and absolutely. In the whole Northwestern States there was, it is true, an increase from 1860 to 1870, but this increase was small as compared with that of the preceding decade.

What are the influences modifying the prevalence of consumption in these two groups of States?

1st. Physical condition and climate.

(a.) Altitude.

(b.) Temperature.

(c.) Moisture.

(*a.*) Rainfall. (*b.*) Atmospheric humidity. (*c.*) Soil.

2nd. Origin, density, occupation and modes of living of the people.

3rd. The general prosperity, conditions of comfort, and that best of all tonics, *hope*.

I cannot, in the time allotted me, attempt to study in detail the value of these different factors as modifying the prevalence of phthisis in the Northeastern and Northwestern States.

I must content myself with indicating a few only of the most important facts.

1st. If we compare the hypsometric determinations of the Northeastern and the Northwestern States, we find, with the

exception of the sparsely inhabited higher ridges of the mountain chains in the Northern Atlantic group, but little difference in the general altitude of the two divisions, and the prevalence of phthisis seems to be modified, if at all, only to a very slight extent by this fact of elevation. We speak now only of the very moderate elevations at or below 1,000 feet. I am strongly inclined to think, however, that as a rule the higher elevations are more favorable for consumptives than the low districts, but probably, in part at least, for reasons independent of barometric pressure.

The difference in the mean temperature is also slight, and is equally inadequate as an explanation of the difference in the prevalence of this disease in the two sections. The frequency of storms, however, is greater in the Northeastern than in the Northwestern States, and it seems almost necessarily true that the changes of temperature are more frequent in the North Atlantic than in the Northwestern States.

3rd. The rainfall is greater in the New England group than in the Northwestern group. This is especially true for portions east of the White Mountains, and following the sea-coast to New Jersey.

In the Northwestern group there is more rainfall on the eastern shore of Lake Michigan than on the western shore, in the river valley than over the prairies. In other words, with only a few local exceptions, the prevalence of this disease is, in the same latitude, greater in regions having the greater rainfall and the most frequent changes of atmospheric humidity. The local exceptions, I think, may be explained by the geological formations. As a rule, other conditions being equal, the disease is less prevalent in regions where the soil is sand or gravel or made up of porous rocks than in hard impervious clays or primitive rocks. Gravel, sand or limestone admit of percolations through the surface layer, and a less amount of water is carried back into the air by evaporation or retained in the surface deposits. Moisture of the ground seems to have a marked influence in the production of consumption, as has been demonstrated, I think, by Drs. Bowdwich, Buchanan and others. If we go still further west, we find that upon the great plains and the interior plateaux, the

rainfall, the humidity of the air and the soil is still less, and consumption becomes a rare disease, except as it is imported from regions of greater moisture, both of air and soil. I think we may justly believe that the diminished prevalence of the disease as a cause of death in Chicago during the last few years has been due, at least in part, to the great improvement in the drainage of the city and the surrounding country. In 1850 the city was low, with nothing but surface drainage, and the surrounding country was a marsh.

A second group of causes may be found in the origin, density, occupations, modes of living, etc., of the population. The population of the Northwestern States has been derived mostly from other parts of the United States and from foreign countries. Up to 1860 there were comparatively few persons of adult years born in these States. There has been a very large immigration from the North Atlantic States and from parts of Europe where consumption as a cause of death is much more prevalent than in this district. The proportion of immigrants was greater from 1850 to 1860 than from 1860 to 1870. The ratio of increase of this disease in the Northwestern States was greater during the former period than during the latter. While in the North Atlantic States there was actually a decrease of deaths from consumption during the former period and a large increase during the latter.

The facts were that many whole families, as well as a large number of individuals with consumptive tendencies, came to this Northwestern country, hoping thereby to prevent the development of the disease. In many cases this was successful. In many others it was not. There can be scarcely a doubt but that the mortality from consumption in the Northwestern States was increased, and in the New England group of States was diminished by the fact of such removal from one section to the other.

From an examination of my own records of consumption in private practice, I find that of 500 cases seen and examined in the last few years, 34 per cent. only were born in or had lived for any considerable time in the Northwestern States. These cases came from Chicago and a territory of one or two hundred miles around the city. Of my hospital cases I have not made an

examination, but I think I am quite safe in saying that not more than 15 per cent. have been natives or have lived for any great number of years in the Northwestern States.

2nd. The population is less dense in the Northwestern States. A large proportion are engaged in agricultural pursuits. Less dust, fewer deleterious gases (except in Chicago), purer and dryer air, coming over the broad sweep of the prairies from the the mountains.

3d. Habits or modes of living also have an important bearing on the problem. We have fewer crowded, steam-heated workshops and factories. Our people also in their houses have better ventilation than the inhabitants of colder and moist districts. It is probably true that steam-heaters and close coal stoves have a positively deleterious influence upon the vitality of the population. In the earlier history of the Northwestern States these appliances of modern life were scarcely known. The open fire-place was found in every house and cabin, and a blazing wood fire carried up the capacious chimney all gases and odors generated in the dwelling, and drew into the living rooms an abundance of clean fresh air.

In the language of Moliere's *Médicin malgré lui*, "*Nous avons changé tout cela*," and I very much fear that the change has not been for the better.

The physical and social conditions of the people in almost all new countries are more favorable to health than in older and more densely populated districts. There are fewer persons sub ject to absolute want or privation. The very fact of immigrating to new lands implies hope and courage, and these are prophylactics and antidotes to disease, especially to consumption. As illustrating the effect of mental distress upon health, I venture to refer to one fact in the statistics of our own city after the great fire of 1871. During the year of 1871 there were in the city 6,975 deaths, and the proportion of deaths from consumption to all deaths was 7.8 per cent. During the year 1872 there were 10,156 deaths, and the proportion of consumption to all deaths was 7.09 per cent. One hundred thousand of our people were made homeless by that calamity. During the 14 months following the fire, 89,724 persons were treated by the physicians of

the Relief and Aid Society. For the year 1872 the proportion of deaths from consumption among the fire patients to all deaths among the same patients was 23 per cent., while the proportion of deaths from consumption in the whole city to all deaths was only 7.09.

I think this fact illustrates in a striking manner the influence of mental distress in developing and hastening the progress of this disease.

There was no real want for food, clothing or shelter, but very many of these poor people had lost their all, often the hard earnings of many years, and to these there seemed to be no future but death. With hope and courage gone, they fell easy victims to the scourge that decimates annually 3,000,000 of human beings.

Finally, I beg to present what seem to me to be legitimate conclusions from this study of the movement of life from 1850 to 1875.

1st. The general death-rate is diminishing in the whole United States.

2nd. The death-rate is diminishing both in the Northwestern and Northeastern groups of States.

3rd. The diminution of the death-rate has been greater in the Northwestern than the Northeastern group.

4th. The death-rate from consumption to population has been increasing in the whole United States.

5th. In the Northeastern States from 1850 to 1860 there was a marked decrease, and from 1860 to 1870 a very decided increase to the death-rate from consumption.

6th. In the Northwestern States from 1850 to 1860 there was a very decided increase, and from 1860 to 1870 a very small increase in the death-rate from consumption.

7th. From the reports of the three periods, 1850, 1860 and 1870, it appears that the increase in the death-rate from consumption for the whole period was greater for the Northwestern than the Northeastern States, while the absolute death-rate from this disease in the Northwestern States was still only a little more than one-half of that in the North-Atlantic group of States.

Of the influences that modify the prevalence of the disease in

these two sections, it seems probable that in the order of importance should be considered :

1st. The origin of the population.

2nd. The rain-fall, storm-movements, changes of the atmospheric temperature and humidity and character of soil as modifying its moisture.

3rd. Density, occupations and modes of living of inhabitants.

4th. Social and moral conditions—or, in other words, general well-being and prosperity.

This paper has reference to the facts of distribution, and the reasons for difference of distribution of consumption. It is only suggestive of modes of prevention in so far as it indicated probable influences of causation.

With the improvements in sanitary science and the encouragement to sanitary study furnished by such bodies as the American Public Health Association, and the interest manifested by the people in health problems, I trust we may find some means not only to prevent the increase but to diminish, if we may not eradicate this disease as a factor of mortality.

No. 4 SIXTEENTH ST., CHICAGO.

OPHTHALMOLOGY AS RELATED TO GENERAL MEDICINE.

BY E. L. HOLMES, M. D.

(Read at the last meeting of the Illinois State Medical Society.)

The best text books on ophthalmology, especially in German, English and French, as compared with those on other branches of medicine and surgery, possess a very high degree of merit.

The relative difficulties which confront the student in the study of these different works, may, I think, be stated somewhat as follows :

A fair knowledge of ophthalmic and of general medical science may be acquired by any one of moderate capacity, who commences study with an elementary knowledge of Latin and Greek and of physics.

Unfortunately, too many medical students not only possess meager knowledge of these branches but, to use a common expression, "do not know certainly what little they do know."

Commencing on the low plane of mental discipline, which I have just mentioned, the diligent student may, nevertheless, pursue his studies with no special difficulty in ophthalmology, till he enters upon the study of the ophthalmoscope and of refraction and accommodation. Here the difficulties for nearly all medical students are very great.

It may be said in truth, I think, that good general surgeons are liable to fail in ophthalmic surgery not so much from want of special delicacy in the use of their fingers, as from want of practice with fine instruments and the lack of judgment founded on frequent review of fundamental principles.

Good physicians also for a similar reason often fail to diagnosticate and to treat properly common diseases of the eye.

I may, without danger of making odious comparisons between the general practitioner and the oculist, call attention to several points, wherein the former is liable to injure patients by not comprehending a few principles *well.*

Consider for a moment the subject of glaucoma. While many physicians still utterly fail to recognize glaucoma, many more than formerly observe cases of the disease at eye clinics and thus learn to comprehend this condition of the eye when they meet it. They are aware that the eye is glaucomatous, when suddenly or slowly there appears an abnormal hardness of the globe, with an enlarged pupil, pain and persistent colored rings around an artificial light at night. They are aware also that an operation, usually iridectomy is most generally advised.

Still, intelligent physicians often advise patients suffering from the terrible pains of acute glaucoma, to undergo a course of internal treatment before seeking relief by an operation.

Every physician should be able to detect an increase of hardness of the globe and should urge, without delay, the appropriate operation when it is a marked symptom.

Iritis is a disease, which every physician should recognize in its early stages. Yet we find the *application* of knowledge often at fault.

Typical cases are easily diagnosticated. There is frequently a failure to make a positive and early diagnosis by neglecting to demonstrate the irregularity and immobility of the pupil after the instillation of a drop or two of solution of atropine upon the conjunctiva. Many eyes are partially or some totally lost in consequence of this omission.

The chapter on sympathetic ophthalmitis is of so very great practical importance to the general practitioner that it should never be neglected by him. We should constantly impress upon his mind the few great pripciples which govern the action of the enlightened surgeon in the management of certain injuries of the globe. These principles in general are simple and readily understood.

The difficulty lies in the fact that practitioners are too often in blank ignorance of these principles. They may have listened to a statement of the facts, presented in a lecture or two, but ever after fail to study and review the subject. The consequence is hundreds of patients with an injury of one eye become totally blind from sympathetic inflammation of the other eye, when perfect vision of the uninjured eye might have been saved.

I have frequently alluded to this subject before this Association. Its importance, and the fact that it has in recent times called forth numerous and earnest papers from many of the most celebrated writers in ophthalmic science in every portion of the world, is sufficient apology for again briefly occupying the time of the society.

Another subject of very great importance has occupied the attention of the most celebrated ophthalmologist, for years. The general results of these observations, as expressed in simple language, should be deeply impressed on the mind of the general practitioner. I refer to ophthalmic hygiene. The subject in its relation to the adaptation of glasses is very difficult for most students and practitioners to master. It requires long study and ample experience to overcome these difficulties. And yet physicians, educated in a few fundamental principles alone, are capable of doing very great good in their fields of labor.

It should be known that, while patients with uncomplicated myopia and presbyopia *may* select their own spectacles without

danger, in very many instances they may do great harm. As a rule, it is safe to state that whenever ordinary work with the eyes, assisted or not by spectacles, causes discomfort, great care and skill is often requisite in selecting the proper lenses.

No physician should be ignorant of the fact that a high degree of myopia, especially if progressive, may endanger vision by careless usage.

Certain facts regarding myopia should in no wise be confined to a specialty.

A physician to whom is entrusted the care of a family's health, should always be able and ready to give good advice regarding the necessity of having the family sewing and reading room well lighted by day, and in the evening well supplied with artificial light. Shaded rooms and those lighted with dull lamps or duller candles are nó places for those using their eyes on close work. Children should be taught to avoid studying too far from the source of light in any room. Both excessively strong lights and cross lights should be avoided, as also too fine or indistinct print. The habit of bending the face too much forward while reading should never be encouraged.

Physicians in every town and village should interest themselves in the structure and lighting of school houses, in the form of desks, and should advise teachers to have all possible regard for the welfare of the children under their care, in reference to the use and abuse of their eyes.

Every physician should possess the skill to use the ophthalmoscope intelligibly in the examination of the anterior structures of the eyes.

The condition of the pupillary edge of the iris, of the lens and the anterior portion of the vitreous, can be quite readily determined by a little practice with the instrument.

In this way the physician can settle authoritatively many questions regarding the conditions of an eye which he could not otherwise comprehend.

On the other hand, an intelligent examination of the choroid, retina and optic nerve, and of refraction by means of the ophthalmoscope, requires such long and patient training that very few

physicians in general practice can ever hope to overcome the difficulties.

Fortunately the cases are comparatively few in which the practitioner can gain much assistance from the ophthalmoscope regarding a patient's general health. In the vast majority of cases the instrument reveals simply the condition of the fundus of the globe and nothing definite beyond it.

It is true that not unfrequently, after an examination of the eye, the examiner almost intuitively enquires whether the patient is suffering from Bright's disease, diabetes, syphilis, tumor in the brain, or whether he is under the chronic influence of alcohol or tobacco. In nearly all these cases, however, the careful physician is able to discover the presence of these diseases before an ophthalmoscopic examination is made. A great mass of supposed facts have been accumulated by distinguished neurologists, which are believed by some to prove that the condition of the vascular supply of the brain may be determined by ophthalmoscopic examinations of the retina and optic nerve disc. But these observations have not yet, I think, been satisfactorily analyzed to enable us to form an accurate diagnosis of the cerebral tissues by such examinations.

I think there can be no dissent from the proposition, that the study of ophthalmology as a specialty should be commenced only after the study of medicine has been pursued at least three years.

And yet every physician upon whom those afflicted with diseases of the eye are absolutely dependent for aid, should study and review year after year some of the fundamental principles of ophthalmology.

A few facts regarding some of the most important diseases should be stated as apothegms, and for ever fixed in the memory.

All this touches very closely upon the whole question of medical education. If a student has faithfully studied and learned the few principles alone in ophthalmology which I have enumerated, he will have required more time than students usually can devote to this branch. If he has pursued each of the other branches of medicine in the same careful, but may be superficial way, trusting to the future for the perfection of his education, he has a task which every medical student should per-

form—and yet which the average medical student in America cannot perform in the three years of his course.

It is much better that studies should be systematized, than that they should be pursued without system. And yet with the very best of systematic arrangement, very few students can prepare themselves for the proper practice of their profession in three years.

I believe public opinion will compel the leading medical schools of this country to elevate the standard necessary for graduation. I am thoroughly convinced, however, that no real advance will be made before the schools insist upon *four full* years of study, each year being divided into two regular terms of at least four and a half months each.

An equivalent to this change would be, perhaps, the requirement that no student should be admitted to a medical college as a matriculate, who had not at least received as complete an education as can be obtained in a good English high-school, and has not studied quite thoroughly chemistry and the use of the microscope, with microscopic anatomy.

I believe the profession, public opinion and the medical colleges themselves will gradually effect a change for the better in the results of medical teaching. I believe, however, that custom, the manner in which American laws are enacted and enforced, the habit in this country of endeavoring to do things rapidly, if not thoroughly, the plan on which our medical colleges are founded and supported as compared with European medical colleges or even with our own literary institutions, will render any absolute radical reform exceedingly slow.

THE USE OF SALICYLIC ACID IN ACUTE RHEUMATISM.

By S. W. Gillespie, M. D., Sterling, Ill.

There is, perhaps, no disease, the treatment of which occasions the practitioner so much trouble and anxiety as acute rheumatism. The number of remedies which have been brought forward for its relief, and which have enjoyed a short season of popularity and

then fallen into disuetude, is almost unlimited. At the present time the profession throughout the world are testing the merits of salicylic acid and its compounds, as remedies in this disease.

It will be conceded by every one that no two persons obtain exactly similar results from the use of the same drug in cases which resemble each other; but the testimony of a large number of persons who have observed the effects of the same remedy in a certain class of diseases, is of service in determining its therapeutic value.

On looking over the literature upon this subject, and comparing the different reports from various physicians and hospitals, both in this country and in Europe, the following conclusions seem justified:

1st. That in acute rheumatism of moderate severity, salicylic acid and its preparations are powerful remedies.

2nd. That they are of less value in the sub-acute and chronic types, and in those in which there is delirium.

3rd. That in moderate cases the pain is relieved, and the temperature lowered in from two to three days after the commencement of the treatment.

4th. That cardiac complications are prevented, as a rule, though they occasionally occur, as do such symptoms as vomiting, deafness and tinnitus.

5th. That to make the cure permanent, the remedy must be continued four or five days after convalescence is established.

As to the explanation of the action of salicylic acid, very little can be said at present. There is no doubt that its action upon the kidneys is very great, and that by its eliminating power in this direction the temperature is reduced, and the removal of the *materies morbi* effected. That the results of the salicylate treatment are much better than those in which the old remedies are used, will be evident by a comparison of the tabulated cases given hereafter (compiled from reports by various authorities) with cases treated by other remedies. The frequency of administration and dose of the drug is varied by different physicians, but the average is 60 centigrams every two hours. The best combination seems to be with sodic bicarbonate, glycerine and water, as the least stomach trouble has followed its use in this

way. In a number of the cases reported, hot applications, such as poultices, mustard draughts and hot fomentations were applied to the swollen limbs, and one physician reported several cases in which the remedial effects of the acid seemed to be increased by the addition to the mixture of liq. potassæ accetatis.

In the cases which I have tabulated, the treatment was with salicylic acid or salicylate of soda, the preference being given to the latter, from the fact of its being more pleasant to the patient and of producing the least amount of stomach trouble. To obtain good effects from salicylic acid, the drug must be pure. Several cases are reported in which dangerous symptoms followed its administration; and, in one instance, death occurred after it had been used a week. These dangerous symptoms are undoubtedly caused by using an article which contains carbolic acid, this acting as a sedative to the heart's action. So far as is known, no unpleasant symptoms have followed the use of a pure acid.

To give some idea of the value which is placed upon salicylic acid and its preparations in the treatment of acute rheumatism, I have condensed a few reports from a number of practitioners and hospitals.

In the Queen's Hospital, at Birmingham, Dr. Sawyer has treated a number of cases of acute rheumatism with salicylic acid. His former plan of treatment was to place the patients between blankets and administer potassic bicarbonate; all cardiac troubles he treated with blisters and leeches over the heart, and Dover's powder. In the cases he reports, the pain was relieved and the temperature lowered in from two to three days after the patient had been placed on the acid treatment. The tendency to pericardial troubles was lessened by its use.

Dr. Carter, of Bellevue Hospital, N. Y., reports in the *N. Y. Med. Record* for Oct., 1876, five typical cases of acute rheumatism which he treated with marked benefit with the combination of salicylic acid, sodic bicarbonate, glycerine and water. In another case reported in the same article, a child of six years, in whom the joints seemed to be invaded generally, the pulse being 140, temperature in the axilla, 39° C., the patient was put on this mixture with the result of reducing the pulse to 128, and

the temperature to 38.5° C., in the first twenty-four hours, besides lessening the pain and swelling in the joints.

Prof. Germain Sée, of the École de Médecine, Paris, in a late clinical lecture, claims that the action of salicylate of soda in febrile articular rheumatism is simply marvelous. He also finds it useful in the sub-acute and chronic forms. The action of the remedy he is not prepared to explain, but thinks it does not act by its anti-pyretic properties, but by some specific action on the morbid agent which produces the affection; for, besides its sedative action, it has a modifying influence upon the morbid tissues. In his cases the swelling, heat and pain were often removed in forty-eight hours. In a few instances the acid seemed to produce delirium, which ceased as soon as the medicine was suspended. In typhoid fever, M. Sée thinks the administration of this preparation is not only useless but dangerous, from its tendency to hasten perforation of the bowels.

Mr. William Corter, of Liverpool, has had one fatal case of acute rheumatism in which salicylic acid was used, and one in which he thinks death would have taken place had not the cold bath been used. In a number of other cases the acid treatment has been very successful in his hands. In those cases where the temperature runs rapidly up to 41.6° C., he thinks the only hope lies in the cold bath.

Dr. S. J. Holmes (*N. Y. Med. Rec.*) says: "After the employment of salicylic acid in a number of cases, I have found it infallible, furnishing early in each case complete immunity from complications, heat, swelling and pain, and in *no* case where the drug was employed early have I met with cardiac troubles. In one case where its employment was delayed, I got endocarditis, but am satisfied had I employed the remedy earlier, the patient would have escaped this complication. I have employed it in cases of varying extent and severity, and as early as the second day have found my patients free from pain and fever, and an abatement of the swelling of the joints on the third or fourth day. By its continued administration for a few days, I have found no propension to immediate return of the disease."

During the year 1877, salicylic acid was tried as a remedy for acute rheumatism in all the hospitals in Chicago, and with vary-

ing success. At Cook County Hospital the uncomplicated cases were generally treated with the acid, combined with liq. ammon. accetatis, glycerine and water, with the results I have condensed in the table below. At St. Joseph's hospital, the acid was administered in an uncombined state, and was found to disagree with the patients in two out of four cases. In other cases marked improvement occurred in two days. At Mercy Hospital, owing to the combination of the acid with potassic bicarbonate, potassic iodide and tincture of stramonium, no conclusion can be arrived at as to its remedial effects. In the hospital of the University of the State of Pennsylvania a number of cases have been treated by the remedy with the best of results, the reduction of temperature being very decided in from two to three hours, with an alleviation of the pain and swelling in two or three days.

As before stated, every one who has used salicylic acid has not met with such good results. Several cases are reported in which it has failed to give relief, and in one or two instances alarming symptoms and even death have followed its use.

Dr. Southey (*Brit. Med. Jour.*, May, '77) says, "while it reduces the temperature and lessens the pain in these cases, it does not prevent cardiac complications." And Dr. J. G. Richardson (*Phil. Med. Times*, May, '76) reports four cases in which the use of salicylic acid was followed by adverse symptoms. In one of these the tendency toward alarming prostration was decided. Dr. Watelet (*Bull. de Thérap.*) details two cases of acute rheumatism, in one of which gangrene of the lower extremities, and in both severe cystitis followed the use of salicylic acid.

Dr. C. H. Hall, Macon, Ga., reports (*Phil. Med. and Surg. Jour.*, Jan., '78) one case of death, and two others in which dangerous symptoms occurred after its use. His first case, a colored woman of twenty years, was taken with acute rheumatism in the joints of her right arm, fever moderate. On the disease extending to the left arm and limbs, he prescribed salicylic acid in doses of three decigrams every two hours. Constant amelioration of the pain, fever and swelling occurred, until he pronounced her convalescent on the seventh day. At daylight on the morning of the eighth day he was suddenly called, and found her

dead. For half an hour previous to her death, she had complained of great pain in the region of the heart, and difficulty of breathing. His second case was that of a young man, seventeen years of age, whose heart had been previously affected by rheumatism. When the doctor recognized inflammatory rheumatism, he ordered salicylic acid in three decigram doses every two hours. This relieved the fever, but so increased the heart trouble that on the sixth day he substituted alkalies for the acid mixture, which resulted in an immediate relief of the cardiac trouble, and a good recovery from the disease. The third case was of a similar nature. The salicylic acid producing such cardiac pain that it had to be replaced with anodynes and alkalies. The doctor attributes the increased suffering and death of the first patient to the continued use of the acid. From the fact that these cases followed each other closely, and were in all probability treated with a dose of the same specimen of salicylic acid, it is fair to infer that the preparation used was an impure article.

The following table of cases has been compiled from various sources. All the patients were treated with salicylic acid or its preparations. The only fatal cases which I can find recorded have been referred to:

NAME.	Number of patients.	Average time patient sick in days.	Ave. time pain was relieved in after treat. commenced. Days.	Ave. time taken to reduce temp. Hours.
Dr. Sawyer, Birm., Eng.	3	12	4	6
Dr. Clark, N. Y.....	5	7	4	—
Dr. Perrin, Mich.....	3	12	2	—
Leeds Infirmary.....	9	—	2	—
Prof. Traube.....	14	—	3	48
Dr. Stricker, Berlin....	14	—	2	—
Dr. Jacobhouse.....	45	—	3	24
M. Sée, Paris.....	52	13	3	48
Cook Co. Hospital.....	18	22	3	—
St. Joseph's Hospital...	4	—	2	—
Other cases.....	33	16	3	24
Total	200	Ave. 13.5 days.	Ave. 2.8 days.	Ave. 30 hours.

NOTE.—In the blank places the time was not given.

SOME OBSERVATIONS ON FIFTY CASES OF WHOOPING COUGH.

By C. F. Swan, M. D., of South Chicago, Ill.

During the spring months of the current year, the suburban town of South Chicago, where I am engaged in practice, was visited by an epidemic of whooping cough. It is well known that the town is situated at the junction of Lake Michigan and the Calumet river, in the neighborhood of submerged soil and swamp lands, and this circumstance, taken in connection with the unusally cold and rainy months of the spring of 1878, may have contributed somewhat to the severity and complications of the cases recorded below.

Having had the opportunity of observing fifty patients affected with this disease in my own practice, I have concluded to make some observations founded upon the therapeutical results obtained by the treatment pursued, though the cases themselves were not, as far as I can determine, unique either in symptoms or course. Unfortunately, this conclusion was reached only after the disappearance of the disease, and, as a result, I have to depend upon the notes taken from my case-book at the time of attending each patient, rather than from details carefully collected with a view to publication. This will explain the very brief and defective record appended to many of the reports.

The first ten patients were treated in the manner detailed below, and without any attempt at establishing the efficiency of any special remedy in shortening the natural period of the disease, or in abating the frequency and severity of the paroxysms. The different medicaments used were: quinine, cod liver oil, tincture of gelseminum, and anodynes in general, with the local inhalation, in two cases, of carbolized steam spray.

After these ten patients had been treated, I determined to make trial of a formula which was suggested to me by Dr. James Nevins Hyde, of Chicago, in a conversation when the subject of

the therapeutics of pertussis was under discussion. The results of this treatment in the forty cases subsequently seen by me, can best be studied by a survey of the records themselves. I may, however, here anticipate somewhat, by saying that in some instances the results were as brilliant as they were gratifying, and that in some others the remedy employed seemed to have no effect whatever, the relative proportion of these cases will appear subsequently. I merely remark that it would seem the best results were obtained when the treatment was begun before any serious complications occurred, though in cases of pneumonia, with constant irritation of the glottis and a teasing desire to cough, marked relief was obtained.

The simple formula* used was first suggested in Germany. It is a solution of quinine and tannic acid, 4 Gms. of the former to 1 Gm. of the latter, in water, syrup, licorice or any agreeable elixir, the dose to be proportioned to the age of the child. Dissolved in water in the proportions given, a milky precipitate is formed by the insoluble tannate of quinia, much resembling an emulsion in appearance, and requiring that the bottle be shaken before the administration of each dose. A point worthy of special note, is that the remedies named, in order to produce the effect, should be used in solution. There is thus produced upon the fauces and epiglottis a marked local effect, due to the intensely bitter taste of the quinia, a local effect which unquestionably contributes to the value of the medication. As a consequence, many children utterly refuse to swallow a second dose; and one who is familiar with the symptoms of the disease, need not be told that persistent attempts to induce such children to take medicine of any kind, usually precipitate and aggravate a paroxysm. Some children, however, are not only readily induced to swallow the solution, but, experiencing the value of the medication, present themselves voluntarily, at proper intervals, for the purpose of taking their medicine, a few even seeming to enjoy it. It is, therefore, to the local action of quinine upon the fauces and glottis as well as to its anti-spasmodic virtues, that the results in favorable cases are to be attributed.

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*[This treatment was first advised by Prof. C. Binz, of Bonn, Cf. *Jahrbuch für Kinderheilk.* I p, 233, Leipzig; 1868; also *Obstet. Journ.*, May, 1870, Vol. III.—Ed.]

Number.	Age, Years.	Stage of Disease when First Observed.	Grade and No. of Paroxysms in 24 Hours.	Treatment.	Duration of Disease.	Deaths.	Complications, Etc.
1	4	.....	.....	Expectant.	5 w.	..	[conj'l hæm.
2	68	B. 1 st.	40	Carbol. Spray	10 w.	..	Vomiting, gastric catarrh,
3	1/4	.....	Very sev're	Expectant.	16 w.	..	Umbilical hernia.
4	7	.....	80	An. Car. Spy.	.....	..	Vomiting, emaciation.
5	4	.....	Very mild.	None.	3 w.		
6	1½	.....	Very sev're	Qu.cod.liv.oil	8 w.	..	Catarrhal symp., retention of urine, struma, syncope, nasal and buccal hæmorrhage.
7	....	.....	Mild.	Anodynes.			
8	....	.....	Mild.	Anodynes.			
9	9	.....	8.	Gel.tr.30c.c.q.iv.h	.....	..	Slight fever.
10	7	.....	8.	" "	.....	..	Slight fever.
11	2	B. 3 w.	Very sev're	Qui. & Tann.	3 d.	..	Pneumonia.
12	1/12	.....	.....	.....	1 d.	1	Spasm of glottis.
13	2	2 w.	Const. cou.	Qui. & Tann.	2 d.	..	Fever slight; med. rel'ed.
14	1/6	2 st.	Very sev're	Qui. & Tann.	3 w.	..	Medicine valueless.
15	2	2 w.	12.	Qui. & Tann.	10 w.	..	Headache; med. valueless
16	7	.....	Mild.	Expectant.	.....	..	Second attack.
17	2	.....	.....	.....	16 w.	1	Marasmus.
18	10	10 w.	.....	Expectant.	14 w.	..	Pneumonia.
19	10	2 w.	Distinct.	Qui. & Tann.	2 d.	..	Disease aborted.
20	14	2 w.	Distinct.	Qui. & Tann.	2 d.	..	Disease aborted.
21	6	2 w.	Distinct.	Qui. & Tann.	2 d.	..	Disease aborted.
22	3	2 st.	24.	Qui. & Tann.	2 d.	..	Disease aborted.
23	1	.....	.....	Med. refused.			
24	8	.....	Mild.	Qui. & Tann.	3 w.	..	Second attack.
25	6	.....	Mild.	None.			[valueless.
26	3	.....	Severe.	Qui. & Tann.	6 w.	.	Nasal & bucc. hæm. Med.
27	4	B. 2 st.	.....	Qui. & Tann.	4 d.	..	Disease aborted.
28	7	.....	Mild.	Qui. & Tann.			
29	3	2 st.	Parox. freq.	Qui. & Tann.	....	..	Anodynes at night.
30	5	.....	No record.				
31	....	.....	Mild.	Refused Medicine.			
32	....	.....	Mild.				
33	....	.....	Mild.				
34	....	.....	Mild.				
35	2	4 w.	Severe.	Qui. & Tann.	3 d.	..	Capillary bronchitis.
36	1½	.....	Mild.	Qui. & Tann.			
37	4	.....	Mild.	Qui. & Tann.	.....	..	[of urine; 3d week measles.
38	6	.....	60.	Qui. & Tann.	7 d.	..	Struma, nasal hæm., syn., reten.
39	2	10 w.	48.	Qui. & Tann.	10 d.	..	Hæm. nas. & bucc., incont. of urine
40	13	3 w.	Severe.	Qui. & Tann.	14 d.	..	& fæc. dur. Par. Capil'ry bronc'ts.
41	6	.....	Mild.	Qui. & Tann.	4 w.		Croupous pneumonia.
42	1	B. 2 st.	.....	Qui. & Tann.	2 d.	..	Vomiting with Paroxysms.
43	6	B. 2 st.	24.	Qui. & Tann.	mrkd	re	lief. Emaciation.
44	4	.....	Mild.	Refused Med.			
45	32	3 w.	Severe.	Qui. & Tann.	mrkd	re	lief. Pneumonia.
46	5	7 w.	Severe.	Qui. & Tann.	7 d.	..	Pneumonia.
47	10	.....	50.	Qui. & Tann.	10 d.	..	Syncope, cap. bron, delir.
48	3	.....	Mild.	Qui. & Tann.	no rlf	..	from treatment.
49	2	1 w.	Marked 24.	Qui. & Tann.	2 d.	..	Disease aborted.
50	6	.....	.....	Qui. & Tann.	no rlf	..	from treatment.

The following cases may be given in somewhat fuller detail:

Case XI. Millie N., æt. 2 years. I saw her first at the beginning of the third week on the fourth day of the second stage. Pulse, 160. Temperature, 40° C. Respiration, 60. Had eaten nothing for 48 hours. Dullness and absence of vesicular murmur over right lung. Stupid. Quin. sulph. 2 grams, tannic acid .50 Gm., syrup. glycyrrh. co. 250 C. C. S. Teaspoonful every four hours, also tincture of aconite root .03 C. C., mustard bath, and cold to head.

2nd day. Pulse, 140; temperature, 39.5° C. Had slept well on the previous night.

3d day. Temperature, 38° C.; pulse, 102. Perspired during the night and only coughed once.

4th day. Countenance, bright; pulse, 100; temperature, normal; appetite, good. Only one paroxysm in twenty-four hours; expectorated without any effort, a frothy mucus, tinged with blood. Convalescence from this date.

Case XVIII. H. J., æt. 10 years. I first saw her on the tenth week of the disease. Pulse, 140; temperature, 40.5° C.; respiration, 45. She had great pain in the right lung with expectoration of a large amount of rusty mucus. Finally, the entire right lung became solidified. Convalescence was slow and accompanied by the production of albuminuria and anasarca. Duration of disease, fourteen weeks.

Case XXVII. Hulda B., æt. 10 years. Twelfth week of tussis convulsiva. 'Caught cold' and had chill, followed by fever and acute mania. I found the patient talking incoherently, with temperature of 41.6° C.; pulse, 140; respiration, 72, and perfectly deaf. Paroxysms every half hour, lasting five minutes, and frequently ending in syncope. Mucous and sonorous râles very loud over the whole chest. Ordered: quinine sulphate .12 Gm., tannic acid .033 Gm., alternately with tincture of gelseminum 0.333 C. C., every four hours and frequent sponging of the whole surface. Bromide of potassium .60 Gm. at night, which secured rest. Convalescent in ten days, hearing regained, and cure complete.

Case XXXV. Mary H., æt. 2 years. I saw her first in the fourth week of the disease. The paroxysms were very frequent

with loud râles, audible over the entire surface of the chest. ulse 140; temperature 40° C.; appetite poor. I gave sulphate of quinine .100 Gm., tannic acid .016 Gm. every four hours with good results. On the third day, the cough had nearly disappeared, and the paroxysms were much less severe and frequent. She expectorated freely a tenacious yellowish mucus. After this date I lost sight of the patient.

Case XLV. Mrs. McV., æt. 32 years. She had been coughing three weeks when I first saw her. Pulse 140; temperature 40.5° C. Dyspnœa and paroxysms very frequent and painful. Dullness over lower lobe of right lung; rusty sputa. I gave her quinine sulphate .60 Gm. at *bed time.* Tinct. of aconite root 30 C. C. every four hours. Morph. .016 Gm. hypodermically. On the next morning, pulse 100; temperature 37° C.; paroxysms less frequent and painful. Ordered quiniæ sulph. .18 Gm., acid tannic .06 Gm. every four hours, with good effect.

Case XLVI. Oscar M., aet. 5 years. In the seventh week of tussis convulsiva, had not lain down for three nights and days, but sat in a rocking chair. No appetite; pulse 140; temperature, 40.3° C.; respirations hurried, about 40 per minute. Photophobia and mental irritability; dullness over lower lobe of right lung, and absence of vesicular murmur; urine scanty; bowels costive; tongue furred. Ordered quiniæ sulphas 0.12 Gm., acid tannic, .033 Gm., every four hours, with tincture of gelseminum, .30 C. C. Paroxysms every hour, and oftener, if irritated. Improvement marked. Seventh day, convalescent. No cough.

REMARKS: Excluding the two cases occurring in adults, aged respectively 68 and 32 years, the average age of the 42 children whose ages are recorded, was 4.7 years. Of the 22 cases, in which a record was made of the period of the disease in which the patients were first submitted to treatment, 6 were seen at the beginning of the second stage, 6 in the second week, 2 at the beginning of the first stage, 2 in the third week, 2 in the 10th week and 1 in the fourth week. Of the 30 cases in which a memorandum was made relative to the severity of the disease, 21 were registered as mild, the symptoms being well marked, 5 as severe and 4 as very severe. The average number of paroxysms in 24 hours, in the case of 10 children, was 32.8. Five cases were

complicated with pneumonia, 4 with nasal hemorrhage, 3 with buccal hæmorrhage, 3 with capillary bronchitis, 3 with fever, 3 with vomiting at the time of the paroxysm, 2 with retention of urine, and 1 each with conjunctival hæmorrhage, umbilical hernia, spasm of the glottis, headache, marasmus, struma, incontinence of urine and fæces at the time of the paroxysm, and delirium.

As regards the results of the treatment—the most interesting point in this connection, the table shows the following results: Of the forty cases visited after the quinine medication was tried, three were so mild as to require no treatment; no record is given in six cases; and six children utterly refused the medicine in consequence of its bitter taste. Two died, one of spasm of the glottis, a baby one month old whom I saw but once; the other of marasmus, after lingering four months. Deducting, then, 17 cases from the 40, we find 23 left. Of these 23, 8 patients received no benefit whatever from the quinine and tannin, or at least the duration of the disease did not seem to be shortened in any degree by the treatment. In two cases "marked relief" was afforded, the duration of the disease not being noted.

But in the case of the fifteen patients not heretofore considered, the disease was completely aborted in an average period of 3.8 days, three of the cases being complicated by pneumonia and two by capillary bronchitis. Due allowance being made for the limited number of observations, the results of which are given above, I think it not unreasonable to conclude that the use of a solution of quinine and tannin internally in whooping cough, may be employed with advantage in many cases; and that in nearly 60 per cent. of the little patients who can be persuaded to swallow it, the disease will be completely arrested in about four days.

ON THE TREATMENT OF THE BOWEL AFFECTIONS OF INFANCY AND CHILDHOOD, INCIDENT TO THE SUMMER MONTHS.

By De Laskie Miller, M. D., Chicago.

(*A Paper Read before the Chicago Medical Society, July* 15, 1878, *and published at their request.*)

Annually, as the warm season approaches, the attention of medical men, especially in large cities, is directed to the increasing prevalence of, and to the mortality from the bowel affections of children. So serious are these affections in unfavorable localities, that the ranks of this interesting class of our patients are decimated despite the most assiduous exertions for their relief.

The suggestions I may make this evening upon the treatment of the bowel affections of infancy and childhood, incident to the summer months, are presented in response to the request of your efficient secretary, who, I believe, should be credited largely for the prosperity of this society hitherto.

It cannot be claimed that my subject is new, nor would I lead you to expect that any element of novelty in its treatment will be advanced. It has been so frequently presented to this society that it may now well be styled trite. Wisdom and skill, however, come from ample facilities for observation extending over considerable time and space. I may well feel satisfied if the accumulated experience and wisdom of the members of this society present, shall be elicited, in a free discussion, which cannot fail to result in useful suggestions.

Would I present an intelligent résumé of the treatment of the bowel affections of infancy and childhood, I must enumerate some conditions which are predisposing, and some causes that are provocative. If some of these seem to be emphasized above that which is usual, it will be to direct especial attention, first, to prevention and, second, to restoration by the minimum of medication.

I am not unmindful that I am speaking to physicians as well qualified as I to appreciate the ever varying conditions present

in these cases, and therefore shall not deem it necessary to elaborate the different topics in detail. The time at my disposal would not justify this.

Allusion in the briefest terms only, is all that will be required in regard to the anatomical peculiarities which predispose to abdominal disease in early life, such as the immature development characterized by softness of the tissues which exist in the mucous membrane its follicles and glands especially of the alimentary tract, and the peculiar arrangement of the stomach and intestines, which renders these organs more susceptible to irritants than in mature life. These are familiar to every physician, but are important as predisposing to vomiting, diarrhœa, gastro-intestinal inflammation, etc.

High temperature, by exalting nervous sensibility while tone is depressed, is doubtless an important factor in these cases. These effects of a high temperature upon the organism in early life, may be everywhere and always observed. They inhere, and must be accepted as inevitable. That high temperature alone is the cause of the high rate of infantile mortality does not appear tenable, else would the returns from country and city, more nearly correspond.

A vitiated state of the atmosphere is more potent in its deleterious effects upon the infant organization. This, too, must be accepted as inevitable in large cities. It is impossible to congregate half a million of people, and still enjoy a pure atmosphere. The consideration of drainage and ventilation comes not within the scope of this paper, however important they are conceded to be. In all cities, conditions exist which are deleterious to the public health, and cannot be avoided by any, except by migration. Causes of contamination, however, which by proper care might be obviated, exist in many dwellings. Medical men know too well, from daily personal experience, that the atmosphere of many dwellings, and these not always limited to the poorest classes, is unnecessarily vitiated to the last degree, by neglect of the most common attentions demanded in every household. Who among us, while making professional visits, has not detected repeatedly the sickening odors arising from decomposing excreta, which should have been promptly removed from the apartment,

and fresh air admitted! It remains for the physician to suggest the changes, and to see that his commands are executed.

It will be proper here to consider briefly, a factor of greater importance in these cases, viz., the food suitable for infants. That furnished by nature, undoubtedly best fulfills the demands of infancy, and in the majority of cases leaves nothing to be desired. Still it does not follow that breast milk is always nutritious or even harmless. Every physician has frequently met with instances in which the milk of the mother, or wet nurse, acted upon the infant's stomach as a direct irritant. And this, too, when the mother or nurse appeared in excellent health. Milk to be acceptable should possess certain qualities, and be free from certain elements. It should be alkaline in its reaction. It is, however, so rapidly rendered acid, that this change is frequently overlooked. Few, I imagine, in the haste of pressing duties, fully realize how suddenly and seriously the milk is affected, by temporary causes, such as slight errors of diet, as by the use of green and unripe vegetables, and also most kinds of fresh fruit though ripe. The effect of these is to render the milk acid, which can be demonstrated by the simplest test.

The influence of diet upon the mother's milk should never be lost sight of when treating infants during the summer months. The immediate effects of acid milk upon the child are imperfect digestion and assimilation, giving rise to restlessness, wakefulness, etc., followed by vomiting and diarrhœa.

The inference is forced upon us, that attention to the regimen of the nurse, claims an important place in the management of the bowel affections of infancy. Manifestly, the articles of the mothers' diet should be restricted, to the exclusion of all acesents, but should be liberal in the quantity of plain nourishment. This leads me to add, that when the milk is deficient in quantity for the needs of the child, it is an error to attempt as is too often done, to increase the quantity by persistently overtaxing the stomach of the mother—with malt liquors—or other alcoholic stimulants, pottages, or even with solid food, to that degree that indigestion and anorexia are produced. Good milk is formed only when the general health is good, and the digestive organs perform their functions normally.

There are other qualities of the milk that not only fail to nourish the child, but produce derangements in its system, which lead to the most disastrous results. Such as the persistence of the elements peculiar to colostrum, or it may be depraved by the early return of menstruation, by the existence of pregnancy, by laborious occupations, by sexual excitement, by emotion and mental excitement, and by other causes which might be enumerated. Hence I conclude that it is proper to inquire into all causes which may impair the function of the mammary gland, ere we resort to the pencil and prescription paper.

No allusion to a substitute for the mother's milk, when that is unsuitable for the child, would be made, were it not a fact, that it is not always possible for parties to secure the offices of a hired wet nurse, and also for the other fact, that physicians permit, and sometimes advise, a resort to starch under one name or another, or to crackers and water, as the principal articles of food, upon the use of which by the infant, starvation, as a rule, should follow. The simple plan of allowing the milk of a well fed cow to stand for two hours, and then by taking the upper one-fourth with the cream properly diluted with warm water, and sweetened with *sugar of milk*, and given at the proper temperature always, will I believe answer the purpose well.

Suitable food is an essential in maintaining the health of the infant. Its development and growth require no less pure air and proper clothing. These constitute the tripod of life and health in early life. In many cases of sickness, all that is required is an adjustment of these essentials.

Were a criticism volunteered, upon the course too frequently followed when treating the diseases of infancy, it would be the too complete reliance placed on *medicine*, to the neglect of the hygienic conditions to which reference has been made. Is it not a fact that medical men are apt to fix the atttention exclusively upon the symptoms present, whether they be vomiting, diarrhœa, or abdominal pain, and at once set about removing these by medication, while they omit the weightier matters of the *law* of hygiene?

Nevertheless, medication may become necessary. When irritating substances have gained admission into the stomach and

bowels, or when congestion or inflammation has set in, and the functions have been arrested or perverted, a resort to the means which experience has approved is imperative.

Vomiting, gastritis, diarrhœa and entero-colitis, are affections attributed to an elevated temperature, and these may be taken as a text for a review of the therapeutics on this occasion.

It will be understood I exclude those disorders of the alimentary canal, which are symptomatic of cerebral diseases or scarlatina, or are produced by other general diseases, and confine myself to the effects of unwholesome food and of abnormal secretions upon the mucous membrane, the irritability of which has been exalted and its tone depressed by high temperature, this atmosphere thus heated frequently introduces into the system, malaria, which aggravates all other symptoms.

Vomiting.—When offending material causes irritation of the stomach, the first indication, viz., its removal, is not infrequently effected spontaneously, by vomiting. In such cases the vomiting should not be considered a disease. It will be wise to withhold the ordinary nourishment for a time; for six, eight, or even for twelve hours, giving only the blandest fluids in small quantity, after which permit a return to the ordinary diet gradually, being assured, however, that the food does not contain offending material. Should the vomiting continue, a laxative may be administered, as castor oil; after its action, alkalies, lime water in milk, 5 to 50 Gms., one-fourth of which may be given every hour or two, and should the patient become restless, as is frequently the case, the following mixture may be found useful:

Glycerine	4
Tr. opium camph	4
Cherry-laurel water	8
Syrup	32

Mix. One teaspoonful every hour or two.

When the ejecta are intensely acid, the mistura cretæ may be substituted for the milk and lime water. If this be given for this condition it should be repeated at short intervals, every half hour in some cases. Failure in obtaining the desired results may be due, not to the remedy, but to the long intervals intervening

between the doses. Strong coffee will also be found a good remedy, and in extreme cases is most efficient.

At a later period, and in a more severe form, attended with congestion or inflammation, characterized by febrile movement, tenderness over the epigastrium, dry tongue and great thirst, cooling bland fluids, alkalies, perfect quiet, and counter-irritation over the stomach are indicated. I have known a blister two inches square, applied for two hours to a child one year of age and over, effect complete relief. The admonition must not be omitted, that in early life it is dangerous to allow the blister to remain too long. When the skin is deeply reddened, remove the blister and apply a light poultice.

Diarrhœa is, many times, only an extension of the irritation starting in the stomach, or it may be a salutary effect of nature to remove offending material, which if retained, would lead to derangement of function and organic disease. You all well know how intractable and dangerous diarrhœa too frequently becomes, when the causes continue to act. It is important that nothing be omitted which will improve the hygienic condition of the patient. Attention should be directed to the quality and *quantity* of the food, and if fed artificially, especially to the *temperature* of the food. It is common for nurses to give the food at one time too hot and at another too cold. The air, the clothing to protect from sudden alterations of temperature, bathing, etc., must be under the supervision or at least under the special direction of the physician, who should also be particular to examine the condition of the gums. In brief, all causes which produce or aggravate irritation of the delicate mucous surface of the bowels should be removed.

When the dejections contain undigested substances as masses of casein, or are excessively acid, as they frequently are, and so acrid that the cutaneous surface is excoriated by their contact, a cathartic is indicated; oil in the first instance, calcined magnesia in the latter; relief will follow. To prevent a recurrence of the diarrhœa, follow the cathartic with pepsin (saccharated) one to three grains, every three or four hours, at the time of feeding. Also give the following:

Bismuth sub-carb	2
Tr. opium camph	4
Syrup of ginger	32

Mix. A teaspoonful as required.

Should the diarrhœa still continue, an astringent must be added, then substitute for the latter the following:

Glycerine	5
Tr. kino	5
Tr. opium camph	10
Chalk mixture	50

Mix. Teaspoonful as required.

The quantity of food must be limited, for if of good quality in excess, it will neutralize the good effects of medication.

The case will not continue long before symptoms of approaching exhaustion will be manifested. These should be detected early, for the prevention of exhaustion is easier than cure. For two reasons quinine is indicated at an early stage. First, it is reliable in arresting debility, and second, because malaria so frequently forms an important factor in the causation, quinine is *par excellence*, the remedy. When properly combined, any child will take it, if not with a relish at least without resistance. The following is suggested as an eligible formula:

Sulphate of quinine		40
Tannic acid		20
Powdered licorice root (Squibb's)	4	
Simple elixir, Syrup of tolu, each	16	

Mix. Teaspoonful every fourth or sixth hour.

Should the disease not yield, a new set of symptoms are liable to supervene, as increased frequency of the pulse, dry tongue, hot skin, increased restlessness, tenderness of abdomen; the discharges will be small in quantity and may contain mucus streaked with blood, indicative of inflammation. In this stage of the case I have to repeat it is important that acrid secretions be promptly removed from the alimentary canal. One teaspoonful of castor oil with one drop of laudanum will usually accomplish this. We must do more. An alterative will benefit these cases such as—

Calomel	20
Sugar of milk.....2	

Make ten powders.

Give one every three or four hours till the effect is perceptible in the secretions. At this stage the dejections are frequently characterized by a peculiarly offensive odor, as if produced by rapid decomposition. When this is the case I have found charcoal to act well. It may be given suspended in milk or cinnamon water, or syrup, or as in the following mixture:

Bismuthic sub-carb	50
Powdered charcoal..... 1	
Tr. opium camph..... 2	
Syrup of ginger.....32	

Mix. Teaspoonful every hour.

When the surface becomes hot and dry, a warm bath, followed by hot fomentations over the abdomen, on which a few drops of the ol. terebinthina have been sprinkled, sufficient to cause slight redness of the skin, will relax the surface and relieve the intestinal congestion. Should the evacuations occur frequently and contain lymph streaked with blood, then the following mixture should benefit:

Plumbic subacet	10
Morph. acetate.....	016
Acid acetic (crude).....	30
Syrup..... 60	

Mix. Teaspoonful as required.

The case has now advanced to a stage when exhaustion follows rapidly. The nourishment should be varied, raw beef, essence of beef, or beef tea may be given; these will be acceptable to the stomach, and are easily assimilated. Stimulants, as brandy in water, will many times be useful in equalizing the circulation and in preventing a frequent complication, viz., spurious hydrocephalus. Tenesmus is a frequent and distressing symptom; an injection of 4 C. C. of mucilage of elm bark, containing one drop of laudanum, will afford relief.

In some cases the patients require an anodyne, when no form of opium is admissible. I have frequently prescribed the following, with satisfactory results :

Chloral hydrate..... | 50
Syrup ..... 32 |

Mix. Teaspoonful as required.

It removes the irritability, quiets the restlessness which so frequently aggravates the debility, and many times will produce refreshing sleep.

Having arrested the violence of the symptoms, it is of the first importance to hasten the convalescence. For should slight symptoms only linger, the slightest causes may produce a relapse, more difficult to control than the first attack. Errors in diet, sudden variations of temperature and the like, are among the causes of relapse. The same vigilance is necessary during convalescence that was essential during the violence of the disease.

In some cases the circumstances of the parties will permit the best thing to be done, viz., to obtain the benefit of a change of air. Every gentleman present is familiar with the rapid improvement due to an exchange of city air for the atmosphere of the country. We have no mountain ranges within easy reach, that would give us an atmosphere best suited to these cases, but we have, what may be considered a great boon, the pure air on the lake. A trip to Mackinac, for those who can afford it, may be advised with great confidence. And for those who for any reason cannot take the trip, temporary but repeated sojourns on the lake will accomplish much. The hospital boat, in a large class of cases, affords the means essential to the successful management of the convalescence from cholera infantum, diarrhœa, etc.

This sanitary measure should be well patronized during the summer months. If one boat is not sufficient others should be employed, and at the public expense if necessary; the charge would not be burdensome.

Much benefit may be attained in cases where the best course is for any reason impracticable, by changing the patient from one room to another, even in the same house. Especially should the change be made to some upper room. The greater the elevation the better, for obvious reasons.

I have only to suggest, in conclusion, that heroic medication, when delicate structures are involved, may sometimes, with advantage, give place to lenitive measures, whose efficiency has

stood the test of time and the experience of the profession. The best results are to be expected when suitable agents are accurately adapted to the pathological conditions present in any given case. I therefore close, as I began, by reiterating that the object of the paper has been to emphasize the importance of securing the best hygienic influences, both in preventing and removing the diseases of infancy in the summer months.

The baleful influences of a vitiated atmosphere upon the blood and tissues of animal life is patent to all in the community. That this influence constitutes an unknown quantity in the causation of the bowel affections of infancy and childhood, is undoubtedly true; still it is among the most potent for evil. If an absolutely pure atmosphere cannot be obtained in large cities, we should at least *strive* to attain the ideal, by avoiding and removing every source of contamination. To accomplish this, it is the duty of every good citizen to aid, by every legitimate means, in the accomplishment of this object. In this direction the exertions of our efficient Health officer, in improving the sanitary condition of the city, entitles him to the thanks of a long-suffering and afflicted community.

Those who for mercenary ends persist in poisoning the atmosphere, upon which all subsist, with deleterious gases from decomposing animal matter, thus causing and aggravating disease, in direct violation of the statute in such case made and provided, should be dealt with as other outlaws, in the last extremity, if necessary—by force.

THE Bulletin Printing Company, of Chicago, who do the press work for this Journal, can supply blanks properly ruled for prescription writing in accordance with the metric system; and Messrs. Buck & Rayner, retail druggists, of this city, are prepared to compound medicines written in the terms of the same system.

Clinical Reports.

NOTES FROM PRIVATE PRACTICE.

A New Mode of Arresting Nasal and Uterine Hemorrhage.

It is a wise maxim that the simplest things are best.

An ordinary rubber condom is passed into the anterior nares, by means of a flexible catheter, and carried back, along the floor of the palate, until visible behind the velum pendulum palati. A few pieces of pounded ice are then introduced into it and pushed back also. Thus the temperature is lowered, locally The elastic rubber bag is then inflated with air, by gathering its neck tightly around the nozzle of a bulbous syringe, till the nasal cavity is filled, the elasticity of the bag adapting its shape to the turbinated bones and septum nasi, and the hæmorrhage, under the combined influence of cold and pressure, of course ceases. Bellocq's sound for tamponing is not always accessible, and even if it were, this plan is better. It possesses another advantage over the sponge, which is used with Bellocq's sound, and that is it never can irritate, is more cleanly, and if renewed bleeding occur, on allowing the air or water to escape, one need only refill it with ice or water, leaving it still *in situ*, till the hæmorrhage is controlled by constitutional measures.

It is almost needless to say that the promptest and most potent of these is a hypodermic exhibition of one gram of the extract of ergot, which is prepared in a soluble form by Squibb.

In uterine hemorrhage, or rectal, I have not yet used this tampon, but its entire adaptation in these cases is obvious. The principle involved is somewhat similar to the uterine dilators of Barnes, though not identical with it, for in those the object is to overcome muscular contractility; in this, to cause the coagulum

or stasis which *cold* combined with elastic and equable pressure produce.

EDWARD C. HUSE, M. D.

ROCKFORD, ILLS., June 24th, 1878.

(We are pleased to publish the practical communication of our correspondent, but must advise him that his method of procedure has been given to the public by an earlier writer.—ED.)

A New Ligature.

The carbolized cat-gut ligatures which Prof. Lister has introduced to the profession, are of great advantage over the time-honored silken ones, or those formed from silver wire. Torsion, acupuncture and the various devices in vogue from time to time, have each had their friends and enemies, their advantages and disadvantages. The principal danger in using any and all ligatures especially upon vessels of the first magnitude, such as the subclavian, the carotid, or the iliac, is secondary hæmorrhage. Septicæmia is not likely to occur after using carbolized ligatures, yet the chief objection to them is that the material of which they are composed is organic. Hence, like all organic substances, they are liable to be either imperfect in structure and break, to be imperfectly carbolized and hence rot, or to produce irritant and septic effects at the point of application. It is not easy to see how the multiple conditions on which their absorption depends, can, in every instance, be complied with, especially outside the walls of a hospital. At best and in any event, the life of a patient, where one of these ligatures has been used, hangs upon little more than a thread and often far less than that. A ligature, to be perfect of its kind, should possess the elements of strength, ease of application, readiness of absorption and simplicity. It should not depend for its advantages upon a material perishable in its nature under *ordinary* circumstances, neither should its perishability and consequent absorption on which its whole value depends, be left to accident or chance.

There is but one substance in nature which entirely meets and fulfills the requisites of a perfect ligature. This substance the writer has carefully tried in several instances; and begs leave to submit his plan unhesitatingly to the profession.

If a piece of magnesium wire be lighted, as it readily is, in the flame of a lamp, and allowed to burn, the process of oxidation which ensues upon its combustion, converts it into ordinary magnesia. The ash which burning magnesium forms, is ordinary magnesia, plain and simple. It is thus innocuous and readily absorbed.

Its action upon the animal economy is absolutely harmless to all textures everywhere. When an artery or vein is tied with a loop of magnesium wire, this process of oxidation goes on more slowly in the presence of animal heat and moisture, yet none the less surely, none the less completely than when it is burned up in the way above cited.

As fast as it is oxidized it is absorbed in the form of magnesia, whose effect, if anything, would be, from its alkaline character, to prevent rather than excite irritation. The length of time required for its absorption depends of course upon the size of the wire used. It is a matter of no importance comparatively, whether it be absorbed in ten days or one hundred if we know *it will be absorbed* beyond a peradventure in all instances. Thus far I have used it but three times, once upon the radial artery and twice in the operation for varicocele. It has seemed to me that this ligature will be of a special value in ovariotomy, where it is desirable to tie the vessels of the pedicle and return it into the abdomen, and in operations for hemorrhoids. It can be used everywhere under all conceivable circumstances and contingencies; it will never break; it is always ready; it cannot untwist like cat-gut or silk; it can neither slip, become stiff or rotten; it can never provoke irritation, absorb moisture, disappoint or cause anxiety, but will always act, "*tuto cito et jucunde.*"

It seems to me, finally, that it must supersede all ligatures, because it is not only better, safer, more convenient and needful, but the *only* thing necessary to overcome the whole category of objections on either one of which, lives of priceless value have in hosts of cases been dependent.

I would earnestly beg that this discovery may receive careful and unbiased attention, as I am confidently assured that it will not disappoint surgeons or patients.

EDWARD C. HUSE, M. D.

ROCKFORD, ILLS., June 17th, 1878.

Correspondence.

THE MANAGEMENT OF FEVERS IN GERMANY.

By W. S. Caldwell, M. D., Vienna, Austria.

In the following article I may not be able to advance any new ideas upon the subject of the management of the febrile state. I propose, however, to discuss certain methods of procedure which are regarded by most practitioners of medicine as either too impracticable for adoption in private practice, or as resting upon evidence in point of utility which is not quite trustworthy.

So much, in fact, has been written, of late, on the cold water treatment of typhoid fever, that the subject would seem to be well nigh exhausted; and the only apology that I have to offer for this encroachment upon an already fully occupied field, is that I hope that some of the suggestions I shall make will be more easily carried out in private practice than those usually given by men who have at their command the abundant resources of a well directed hospital.

Much, however, as this subject has been discussed, and in spite of the wonderful statistics lately published by Liebermeister, showing the beneficial effects of the cold bath as an antipyretic agent, during my late visits to the English and French hospitals I found that typhoid fever was *generally* treated by the administration of the mineral acids, much after the plan that I was taught in the first lectures I attended a quarter of a century ago. In a course of lectures delivered by the professor of practical medicine in one of the New York colleges during the last winter on the same subject, he never even referred to the benefits to be derived from the use of the cold bath in the management of this disease.

A late work on the nature and management of fevers (Ueber Wesen und Behandlung des Fiebers), by Dr. Carl Emil Buss, of Bâle, is now attracting considerable attention in Germany.

The writer is a warm advocate of the fermentation theory as a cause of the febrile state, and he says that the irritant is a living organism, which, by its multiplication in the circulation, calls forth the lesion in each particular case.

"Others again claim that the presence of a living organism in the blood is not the *prime* cause of the complex symptoms, but that the products of decomposition which are produced by them, are more likely to act as an irritant, and thus cause the rise in temperature."

The injection of putrid matters into the circulation is found, he says, to produce septic fever in a direct ratio to the quantity of bacteria which such fluid contains. One of the most pernicious results that follow as a sequel of fevers, is a degeneration of the muscular substance of the heart, and a parenchymatous change in other organs essential to life. "Although hyperpyrexia may account in part for these results, it is probable that they are also largely produced by the presence of living animalaculæ, which as yet we are unable to discern, but which act essen tially the same as the trichina spiralis upon the muscles of the body when it has gained access to the system."

Taking this view of the nature of fevers in general, which the author claims are, in their manifestations, essentially the same, our remedies should be such as have a tendency to destroy these low forms of animal life. "It is wonderful that those remedies which are the most powerful anti-pyretics, all possess in an eminent degree antiseptic properties also. In confirmation of the above theory, it is found that the remedies that act so happily in reducing animal heat when we have a high temperature, produce little or no effect when given to a healthy individual. It is very probable that the anti-pyretic properties of these drugs are effected by their combination within the circulation with the septic element that produced the fever, and in this way we have a favorable result produced."

While the author is a warm advocate of the use of cold baths to reduce the temperature in fevers, he thinks that their use

should be supplemented by other treatment, for in such diseases as diphtheria, scarlatina, and the worst forms of abdominal typhus, our patient is stricken down at once, and succumbs rapidly to the overpowering effects of a prime cause, that our symptomatic treatment fails to reach.

The indications in the treatment of fevers are, first, to neutralize the "causal irritant;" and, second, to use such other means as we have at our command, to assist in the reduction of the temperature.

To fulfill the first indication, the best remedies are the salicylates and cresotinic acid. Buss says, "the antipyretic effects of the salicylate of soda cannot be equalled by any other drug. It is far preferable to the salts of cinchona, because it does not retard the elimination of carbonic acid in the system, and acts more energetically in reducing the animal heat. Within three or four hours after the drug was given, the fall of temperature was generally from two to three degrees, but when given largely, the reduction was as much as five degrees. This formula for the use of this remedy in typhoid fever is as follows:

Salicylate of soda	15
Syrup of cinnamon	30
Water	180

Mix.

Give one tablespoonful every three hours, excepting eight hours of the night, when the patient is allowed to sleep.

Should this dose offend the stomach, he advises to give one-third the quantity and repeat the dose every hour.

Cresotinic acid, given to the extent of 10 to 15 grams in the twenty-four hours, was found equally efficacious.

The effect of these remedies was, as the author asserts, to shorten the duration of typhoid fever. Their internal use was in most cases supplemented by the use of the cold bath, but as this part of the subject is not very different from that given by Liebermeister, I will not quote the latter in this connection.

The tabulated statistics that are given, showing the anti-pyretic effects of these remedies, I shall also omit.

Pneumonia in Children.

Dr. Monti, a docent of the University of Vienna, a lecturer

on diseases of children at the Poliklinik, and one of the very best teachers in this city, treats both catarrhal and croupous forms of pneumonia of children by giving to a child, one year old, teaspoonful doses of a one per cent. solution of the salicylate of soda every two hours. He envelops, at the same time, the chest and abdomen in large clothes wrung out of water of a temperature of 18.3° C., and changes these every one-half to two hours, according to the temperature. Expectorants of all kinds, he thinks are injurious, so long as the air vesicles are involved, and only uses them when the vesicles are no longer involved, and there is left simply bronchial irritation, with dryness of the mucous lining. In the

TYPHOID FEVER OF CHILDREN

he gives, to a child six years of age, a teaspoonful every three hours of a three per cent. solution of the salicylate of soda.

If the temperature does not run higher than 38.3° C., he uses no other treatment except nourishment in a fluid form, and red claret wine in doses according to the tendency that exists to a failure of the heart's action. Whenever the thermometer in the axilla registers a temperature above 38.3° C., he then resorts to the use of cold packing with water ranging from 13° C. to 18° C. If the case be a more severe one, and the temperature runs as high as 40° C. to 40.5° C., he resorts to cold baths, putting the patient into water at 30° C., and then adding cold water to reduce it from 18° to 24° C. These baths are only used as long as the fever is very high, the patient being kept in them from 10 to 30 minutes, according to the time necessary to reduce the temperature.

Speaking of the effects of quinia in fevers (upon which subject the doctor remarked that the average physician was a maniac), he only gives the remedy in their later stages, and then in small doses as a tonic.

To illustrate in what manner quinia acts as an anti-pyretic, he related the following case: "I was called a few days ago in consultation with another physician to see a child aged ten years, suffering from typhus abdominalis. As the attending physician was fond of giving quinia in this disease, I finally consented that the patient might have 6 decigrams of the drug, divided into

three doses, and given at intervals of three hours, just before the exacerbation of the fever. The physician not understanding the metric system of weights (it having been introduced into Austria for only a few years), wrote his prescription for 6 *grams* instead of *decigrams.*" Dr. Monti was called again soon after the child had taken the last dose, and found it as deaf as an adder, breathing heavily, and capable of being aroused only to semi-consciousness with great difficulty. The temperature was reduced to 35.5° C. in the axilla, though before the remedy was taken it was 40° C. Stimulants were given, cold was applied to the head, and warm applications to the feet, and after some hours the patient recovered from the effects of the drug. In this case, although there was such a marked reduction of temperature at the time, the following day the exacerbation of the fever was the same as before the remedy was given. The inference drawn by Dr. Monti from this case, as well as from an extensive trial of the drug in other cases of typhoid fever, is that quinia only acts as a *decided* anti-pyretic when given in doses that must be considered as *poisonous* in size, and that even when these doses are given daily, they exercise no influence in shortening the duration of the attack.

As bearing on this question of the anti-pyretic effects of quinia in this disease, I will give the following case from my own private note-book. During the fall of 1875, while we were having a severe epidemic of typhoid fever in Warren, Ills., I was called to attend the daughter, aged 13 years, of Mr. H——, a lawyer of that town.

The patient had enjoyed previous good health, and was large and well developed for her age.

The attack was severe from the outset, the temperature running to 40° C. after the first week, and rising to 40.5° C. after the middle of second, and was accompanied by marked cerebral disturbance. My plan has always been to combat vigorously a temperature that reaches or excels 40° C. For this purpose I usually wring cloths from water varying from 15° to 20° C., and envelop the body from under the axilla to the knees.

If the patient be an adult, the cloth used should be as large as a common sheet.

I direct that these cloths should be changed as often as every 15 to 30 minutes, until the temperature is brought down to a point that I consider compatible with the safety of the patient, say to 38° or 39° C.

To use this remedy requires considerable judgment on the part of the nurse, with whom I always leave a thermometer, so that my cold applications may be used intelligently.

As sometimes happens, the case above referred to was very sensitive to the application of the wet pack, and so after trying it in a rather unsatisfactory manner for a week, I determined to discontinue its use, and resort to quinia to fulfill the indications for which I had been using the cold water.

With this view I gave her 0.48 gram of the remedy at 4, 6 and 8 o'clock p. m., for three days in succession. The effect of the drug was to increase the nervous disturbance with my patient, without in the least lessening the temperature of the body, and finding her in every way worse at the expiration of this time, I fell back with renewed energy on my hydropathic treatment of the case.

From this time on I gave no medicine save a single dose of chloral-hydrate at night, kept the temperature down to 38.3° C., and my patient grew gradually better and made a good recovery, after a duration of the fever of eighteen days.

In Prof. Duchek's wards here in Vienna, to which, by the courtesy of his first assistant, Dr. Brenner, I have had free access at all times, the treatment of the milder cases of typhoid fever is entirely expectant.

The patient is given small doses of dilute sulphuric acid, but as this is their universally prescribed *placebo*, it must not be considered in the light of an attempt at medication.

One point in their dietetic rules here is worthy of note, and that is that no patient who has typhoid fever of even the mildest type, is allowed a single mouthful of solid food as long as he has any increase of temperature. Milk, soups and claret wine are used exclusively as nourishment.

When the case is more severe, and any treatment is considered necessary, either the salicylate of soda or quinia is given.

The former is preferred in the earlier stages of the disease, or

where there exists any marked tendency to cerebral hyperæmia.

The manner of prescribing the remedy is as follows:

Salicylate of soda	5
Syrup of raspberry	20
Water	200

Mix.

Give one tablespoonful every three hours during the waking hours of the patient, or from 14 to 16 hours out of the twenty-four.

When quinia is used, 1 gram is given in the twenty-four hours, usually in three doses, at 2, 5 and 8 p. m.

Cathartics are not given, the bowels being moved every three or four days by injections.

But it is to the manner of using cold water in these wards that I wish to call the attention of the reader, as it is entirely practicable, and its value such as after considerable experience I have verified in my own practice.

First, *baths* are entirely ignored.

The arguments against them, are: first, that their use involves an amount of discomfort to the patient, that is not compensated for by any additional advantage that they offer over the wet sheet. Second, in using them it is necessary to subject the patient to an amount of physical exertion that is likely to act deleteriously on the future course of the disease. In other words, they deem it essential that the patient should be kept as absolutely quiet as possible during the whole course of the fever.

If he be feeble, in the later stages of the disease, he is not allowed to rise upright in bed, even to evacuate the bladder or bowels.

This perfect quiet is supposed to retard the fatty metamorphosis in the muscular tissue of the heart and other organs.

Fever patients here are usually dressed in a single garment, open in front, reaching to the feet, somewhat after the fashion of a lady's night-dress. A rubber sheet is put over the mattress to prevent its becoming damp. When the temperature rises to a point that is thought to be unsafe, they resort to the cold pack, and use it in the following manner. The patient, being dressed as above indicated, a sheet is wrung out of water of a temperature

varying from 7.5° to 15.5° C., and in this his entire body is enveloped, and over this is thrown a dry covering. These sheets are changed every 10 to 20 minutes for from two to five times, a thermometer being kept constantly in the axilla to denote the fall in temperature that is required.

After the temperature has fallen, the patient's garment as well as his bedding is changed, for the sake of dryness.

By the assistance of two intelligent nurses, all this is accomplished with the least possible amount of exertion on the part of the patient.

If he be decidedly feeble, he is given either brandy alone, or milk punch before the wet sheets are used.

The advantage of the procedure above given is that it can be carried out easily in private practice, which is not the case with the cold baths as recommended by Liebermeister.

Pneumonia.

To illustrate the treatment of this disease here in Vienna, I will give the clinical history of the following case, which I watched carefully every day during its progress:

Anna H., a domestic, aged 24 years, was admitted to the Allgemeinen Krankenhaus, May 13th, 1878. Three days before, the patient was taken suddenly ill, her first symptoms being a well marked chill, which was soon followed by a severe pain in the right side. On admission, the right lung was filled with an infiltration, she was raising rusty sputa, and had all the symptoms of a well-defined case of pleuro-pneumonia dextra.

Her respiration was 24, pulse 100, temperature 39.4° C.

Cloths wrung out of ice water were applied to the right side.

Internally, she was given one gram of the salicylate of soda every four hours, each dose being immediately followed by a large draught of cold water. She was also given an infusion of digitalis, made by adding 1 gram of the leaves of the herb, to 200 grams of boiling water, of which one tablespoonful was administered every four hours.

From the 13th to the 16th the case remained nearly stationary; the pleuritic pains in the right side were very severe, but the

relief obtained by the application of the ice water was very marked indeed.

May 17th. Patient much worse.

Respirations, 45; pulse, 120; temperature, 40.5° C.

Physical examination showed the entire lower lobe of the left lung involved in a pneumonic process in the first stage, accompanied by a severe pleuritic pain in the same region.

May 18th. Patient still worse.

The lower lobe of the left lung was consolidated, and the upper lobe involved. Delirium, pulse 130, respiration 50, temperature 40.7° C. Digitalis and salicylate of soda were discontinued, and in their stead, quinia 30 Ctg. were given every six hours, combined with the free use of brandy. The entire chest, from under the axilla to below the ribs, was enveloped in wet cloths wrung from ice water which were changed every 20 to 40 minutes, depending upon the ease and tranquillity of the patient, as she called for them to be repeated as soon as they became warm.

May 19th. Respirations, 50; temperature, 40° C.; pulse, 125; patient still delirious. Prof. Duchek, who examined the case, and made it the subject of a clinical lecture, considered the prognosis as extremely grave, the only favorable symptom being a slight subcrepitant râle to be heard in the lower lobe of the right lung, showing a tendency to resolution. Patient was ordered increased dose of brandy, so that from 400 to 500 Gms. were to be given in the twenty four hours. The cold applications to the chest were vigorously continued.

May 20th. Patient better; temperature, 39° C.; pulse, 115; respiration, 25.

Stimulants lessened in quantity, cold to the chest hourly.

May 21st. Right lung nearly freed from exudation.

On account of the late involvement of the left lung, the patient had some fever until the 24th, from which date she rapidly convalesced.

I find here, both in fevers and in cardiac diseases, that digitalis is used only while there is a comparative vigorous circulation; in fact, to fulfill indications exactly opposite to those for which it is given by most physicians in the United States.

They use no counter-irritants to the chest in the hospital here, in cases of pleuro-pneumonia, but depend upon the cold cloths exclusively.

Expectorants are ignored, except to relieve a bronchial catarrh that may follow the lung complication as a sequel.

The favorite expectorant is a combination of sulphuric æther, syrup of liquorice and ipecac.

Editors Chicago Medical Journal and Examiner:

Ten or fifteen years ago, the journal-reading portion of the medical fraternity were aware of the existence of a live medical periodical, edited in Leavenworth City, by Dr. C. A Logan, a gentleman well known as one of the most eminent physicians west of the Mississippi. Connected with the geological survey of the new State of Kansas, his writings gave evidence of a mind trained by close observation of nature in her widest relations. It was a matter for regret when he ceased to use his pen, and disappeared beyond the horizon of our view. This present writer had long given him up for dead, when at length he appeared once more among the haunts of men—this time, upon the streets of Chicago—after a period not of suspended animation, but of honorable exile as minister of the United States resident in Chili. And now comes this modest little volume, in which our distinguished friend has embodied the ripe results of his observation and thought while dwelling in that far distant and little known land.

Finding himself in a country remarkable alike for its relics of ancient society, and for the physical conformation of its territory, the observing stranger was not long in discovering that even the forms of disease which are there prevalent exhibit the modifying influences of the peculiar conditions under which they occur. Certain diseases, notably the infectious diseases, are almost unheard of in Chili, while those that do occur, like typhoid fever and small-pox, present decisive symptoms of divergence from the European and North American type. Certain diseases seem to have originated spontaneously in that country, while others which

are epidemic in Europe and in North America, are either unknown or seem to lose in great measure their infectious properties when introduced among the people who inhabit the Pacific slopes of the Andes. An inquiring mind could not fail to busy itself with a search for the causes of such departures from the types of disease which prevail in other countries; and, accordingly, the doctor has in his little volume set forth his views regarding infectious diseases and their limited prevalence among the inhabitants of the western coast of South America. One of the principal causes of this peculiar immunity is by our author thought to be ozone. This substance is generated in great quantity by the electrical activity, to which he also refers the fearful earthquakes which agitate that portion of the continent. This hypothesis leads the doctor into a series of excursions, in which he sets forth pretty fully his belief concerning these appalling phenomena. We are treated to a chapter on force and energy, in which, though if this were a text book on physics one might regret the absence of the luminous definitions of a Balfour Stewart, the author's meaning is clear enough, and is in accord with the most advanced scientific thought of the day. This assertion may seem strange to the tyros in science, to the men of one text book, but no one can read far or think much without finding himself in the presence of just such problems as Dr. Logan has here brought up before the mind of the reader. The same thing is true of his chapters on the causation of earthquakes. This hypothesis will at once array against him all those who have only a slight acquaintance with the subject, and all those who are partisan exponents of rival hypotheses; but when one examines the literature of the subject, it appears that if one cannot fully agree with the doctor, he is certainly in very good company, and his observations are worthy of very respectful attention. The idea that certain earthquakes are the result of "subterranean lightning," has probably occurred to many observers who have watched the behavior of submarine cables before and after an earthquake shock—behavior which shows beyond question that tremendous electrical disturbance is a concomitant, if not the actual cause of the agitation of the soil. These observations are as yet in their infancy, and it is to be desired that our author may yet conclude to publish his own notes

in full, for it is only by careful accumulation and comparison of facts that we can hope to arrive at any degree of certainty regarding this much debated subject.

Having thus cleared the way, our author asserts that in those parts of South America "where the *earthquake energy* is most strongly and constantly developed, the existence of large number of infectious diseases which devastate other parts of the world is unknown; and * * that in such portions * * alone as possess a rainfall during a limited part of the year, are any of these diseases to be observed; and then, perhaps, as a rule, after the winter earthquake has passed." He then disposes of the objection that the isolation of that quarter of the globe may act as a protective quarantine, by showing that direct communication with other countries is now so speedy and constant that isolation no longer exists. The only facts capable of influencing the case, then, are atmospheric aridity, and a highly electrical condition of the earth and air. This at once suggests the idea, that, if bacteria and other similar aerial organisms are the causes of infectious diseases, perhaps the dryness of the air is sufficient to prevent their existence, and so to prevent the occurrence of those epidemic diseases which have been supposed to be caused by their development. But investigation has convinced our author that these microscopical organisms are as abundant in Chili as in other parts of the world; consequently, he draws a conclusion unfavorable to the bacterian theory of infection. The remaining portion of this division of the book is devoted to a brief but interesting sketch of the sanitary peculiarities and prevalent diseases of the Pacific coast of America, a sketch which makes one regret that the author had not devoted a larger space to this part of his subject.

The second half of the volume is occupied with what may correctly be called the Physics of Infectious Diseases. The author here boldly attacks the problem of the origin of such diseases, and the method of their development and propagation. It is here that he is at his best. It is upon this field that he has earned his right to a place among the foremost medical philosophers of our day. This proposition I am ready to maintain, in spite of certain errors of detail into which he may have been

betrayed. For example, when one considers the existence of lowly animal forms without a nervous system, the assertion of our author, that "animal life begins in the central nervous axis," seems too exclusive. After a certain stage of evolution has been attained, there is a sense in which this proposition is true; and in its application to the human animal the doctor has on his side such thinkers as President Porter, and some of the ablest men who ever lived. This whole chapter on the Ideal Function of the Nervous System, will undoubtedly arouse a great deal of dissent, much of which, however, will be found to grow out of the difficulty of following so abstruse a discussion when presented in so condensed a form. In like manner, the author, in his chapter on the source of Animal Heat, allies himself distinctly with those philosophers who recognize the existence of a *vital force* which is different from, yet capable of strict correlation with the ordinary physical and chemical forces. To such condensation of expression, however, has he restricted himself in this chapter that probably nine-tenths of his readers will fail to appreciate its real significance. It is this magnificent endeavor after compactness of form and terseness of utterance which forms one of the greatest obstacles to the success of this book as a literary adventure. This, however, is a fault which it shares with the very best of company, so the author must not be discouraged if his work cannot vie in popularity with the latest periodical literature. In fact, it often seems as if those minds which are best adapted to attract popular attention to their work are the least fitted to grapple with the great problems of nature, and are the most likely to rest contented with the shallowest theories of the universe. It is, therefore, positively refreshing to meet with one who has the courage, and the knowledge and the insight necessary to enable him to rank himself with the minority in opposition to the fashionable heresies of the day. This our author does, placing "himself in direct antagonism to those ultra chemists who maintain that there is nothing peculiar in organic chemistry, and that its actions are subject to the same laws as those governing inorganic matter; and who attempt the proof of the correctness of this view by their ability to construct some compounds belonging to the animal body outside of the operation

of its peculiar laws." The important results of the chemist "in this direction only prove the existence of a force presiding over the methods of vital chemistry which renders him impotent to construct such eminently vital products as urea; not to speak of the characteristic structures of a healthy body, as muscle, flesh, blood, nerve." Here the doctor may be thought to have laid himself open to attack, for the whole army of small chemists is unwearied in its self-glorification over the artificial production of a body isomeric and isomorphic with urea. The difference between the vital chemistry of the animal cell, and the synthetic chemistry of the laboratory becomes apparent when these two substances are subjected to the action of polarized light, and are found to behave differently in its presence—thereby justifying Dr. Logan in his position.

The same logical subtlety and penetration is evident when the doctor enters upon the discussion of the various theories of fermentation which have been put forth. As might be expected, he sides with Liebig against that arrant sciolist Pasteur; and, after reviewing the hypotheses of bacterial infection, and contagious bioplasts, he brings the reader through a course of masterly reasoning to the conclusion from which there is no escape, that the cause of each infection resides in a specialized molecule, born of abnormal molecular movements in the living tissues of the body, and capable of impressing its unhealthy modes of molecular motion upon other molecules with which it may be brought in contact. This he calls "the infectious molecule." This is the portable agent which may find its way from one body to another, sometimes needing to ripen in the soil of the earth or under water on its way; never reproducing itself like a living "germ," but always potent to disturb every adjacent molecule of protoplasm, and often able to impart that peculiar energy to such adjacent molecules until every particle of animal body may have become thus endowed with the modes of motion and properties characteristic of the original infectious molecule. This is a great conclusion. It is the only one logically possible in the present state of science, and yet it is by no means the fashionable theory of the day.

One of the greatest hindrances to the establishment of sound

medical doctrine in these times consists in the fact that so few of the leaders of medical opinion are qualified to form an independent opinion upon a subject like this. Consequently, the majority of physicians are at the mercy of the least little upstart microscopist, who may happen to infest a popular German University. Witness the lamentable delusions now current regarding diphtheria and similar diseases. Witness the crowds of people who go astray in the wake of Pasteur and Lister, and Tyndall and other "blind leaders of the blind." This little book, however, gives encouraging evidence that all have not yet "bowed to the knee of Baal," but that there still remain a chosen few who will yet bring back the medical host to its rightful allegiance. This must necessarily be a tedious undertaking, for, unfortunately, the men who most need the corrective influence of this pregnant little volume, are precisely the very men who will never even make the effort to read beyond its title page.

HENRY M. LYMAN.

AN OPEN LETTER TO THE BRITISH MEDICAL JOURNAL.

MY DEAR BRITON:—In the number of your valuable journal, dated June 8, 1878, I find an article on the Menstrual Secretion, written by George Harley, M. D., F. R. S., to which the following note is appended:

"This article is writen acording to the new method of speling words without encumbering them with needles duplicated consonants."

On consulting further the two columns devoted to the subject named above, I find Fallopian printed *Falopian;* call, *cal;* attention, *atention;* offered, *ofered;* will, *wil;* err, *er;* better, *beter;* all, *al;* correct, *corect;* and similar changes in every word which we have been accustomed to spell with duplicated consonants.

This admirable innovation comes to us across the Atlantic from the country which first taught us the spelling of our common language, and illustrated its form in the pages of Addison, Cole-

ridge, Shakespeare and De Quincy. It comes, too, from the people who have habitually sneered at any orthographical change effected by Americans. I have therefore read with an interested surprise the remarkable composition of George Harley, M. D., F. R. S., and have ventured to ask you the several questions given below, upon the answers to which will largely depend an adoption of the "new method" which you have so ingeniously presented:

1. When Dr. Harley writes: "in order that the points * * *shal* be made perfectly clear," does he mean, "*may* be made perfectly clear"; or was Lord Macaulay in error when he declared that "not one Londoner in a thousand misplaces his, shall"?

2. When Dr. Harley writes: "*likely* to have their orifices ocluded," does he mean, "*liable* to have their orifices occluded;" or is the distinction between these words "an Americanism"?

3. When Dr. Harley writes: "The condition of things then found was carefuly delineated in water-colors, by a profesional artist, and stil exist in all their pristine exactitude," was he guilty of gross vulgarity and violation of the simplest rules of English grammar, or are these possibilities contemplated by the "new method"?

4. When Dr. Harley writes "presumedly" for "presumably," did he coin the word; or find it in some dictionary which has not yet crossed to these shores?

5. When Dr. Harley writes, "contrast to," for "contrast with," I desire to know if he perpetrated a Briticism?

6. When Dr. Harley writes that "the menstrual fluid consists of three *parts;*" I long to know how many "parts" have such other fluids as bile and urine.

7. When Dr. Harley writes: "although not then fuly conscious of the invaluable specimen;" was he simply not aware of its great value, or was he really rendered semi-unconscious by his "axident"?

8. When Dr. Harley writes: "and, although the woman's organs of generation had nothing whatever to do with the question of suspended animation—as I was at the time in question lecturing to the students of University Colege, on the subject of reproduction—after finishing the necropsy in as far as the patho-

logical apearances of drowning were concerned;" I am anxious to learn whether the "new method" requires one to place his phrases as promiscuously as if they were discharged from a pepper-pot.

Many other questions are suggested by the perusal of this singular article, but I conclude with,

9. Is it well for us to make radical changes in the orthography of our mother tongue before we have learned how to write it with accuracy? In short, shall we strain at a cacography and swallow a grammar?

You are, my English cousin, the accepted journal of the British Medical Association, published in a great centre of British learning, and read probably by the larger part of the whole number of British practitioners. You have, lo, these many years, trained your batteries of criticism on medical works of American origin, and as often condemned them, even when they were of great practical value, on account of trifling blemishes in literary finish. Therefore, I cannot but regard you as of high authority in these matters. And, in the midst of my labors, which are divided between the practice of physic and the protection of my saddlebags from the attacks of the Indian and the buffalo, I write in the hope that you will enlighten my ignorance.

Fraternally yours,

HUNTINGTON THOMAS.

CHICAGO, June 27, 1878.

ELASTIC CRAYON OF NITRATE OF SILVER.—M. Pajot takes a laminaria tent, two millimeters in diameter, dips it into thick mucilage, and then rolls it in finely powdered nitrate of silver, and allows it to dry. He thus obtains an elastic crayon, of the ordinary size, which may be introduced into the uterus without fear of breaking. He believes this means to be applicable to other cavities, and for other more powerful caustics.

Reviews and Book Notices.

HOUSE DRAINAGE AND WATER SERVICE IN CITIES, VILLAGES AND RURAL NEIGHBORHOODS, WITH INCIDENTAL CONSIDERATION OF CAUSES AFFECTING THE HEALTHFULNESS OF DWELLINGS. By James C. Bayles, editor of *Iron Age* and *The Metal Worker*. Pp. 351, cloth. Published by David Williams, 83 Reade St., New York, 1878.

This work is the practical development of an extensive correspondence and discussion in *The Metal Worker*, of questions pertaining to sanitary engineering. It was not, however, until the author became aware of the necessity of such a work by the appreciation on the part of plumbers of his two papers read before the Public Health Association of New York, on house drainage, that he resolved on publication. Were our words likely to reach the plumbers, we should recommend this work to them in terms of the highest commendation. But naturally it is more with reference to the relation which it bears to the profession, that we consider the volume.

The object which the author sets before him is well expressed by the title of the book, and whether we refer to the chapter on sewer gas, waste and soil pipes, traps and seals and the ventilation of soil pipes, the chemistry of plumbing, or sanitary construction and drainage of country houses, we find that the author is at once comprehensive, lucid, concise and eminently practical. He justly deprecates the niggardliness which is too frequently displayed, even by men practical on other points, when the question of plumbing is the subject of consideration; and shows the results of such supposed economy in the frequent repairs necessitated in the actual plumbing, and the unavoidable and often

incomprehensible continuation of ill-health and untimely death. To show the importance of the work which Mr. B. has undertaken, we need only refer the reader to the very important report of the Officer of Health for Glasgow, which he read before the Philosophical Society of Glasgow. This paper appears in full in the *British Medical Journal* for May 11, 1878, and shows unmistakably the relation between the waste-pipe service of the houses and the prevalence of diphtheria and enteric fever. We only regret, since reading Mr. B.'s book, that the construction of the traps in the Health Officer's report were not more definitely recorded.

Mr. Bayles' remarks on the action of the different kinds of water on lead cannot fail to be interesting to practitioners; it might even be said that those who remain ignorant of such facts are positively culpable.

The following extract gives Mr. Bayles' own experience in the matter of earth-closets (p. 272):

"From personal experience, and after the severest test which I could devise, I can recommend the earth-closet as the best, cheapest and most generally satisfactory of indoor commodes for country houses.

"There are several forms of earth-closets in the market. From $20 to $25 is the price of one made after the most approved pattern, with a capacious hopper, and an arrangement for discharging a fixed quantity of earth into the receiver. Those who are able and willing to pay this price will get a good article, with full directions for its use and care. For the benefit of those who are not, it may be said that a convenient earth-closet can easily be made at a small expense, and without infringing anybody's patents, by any person with intelligence enough to build a hen-coop. The writer's experience in building and managing an earth-closet may not be without interest. It was made of pine boards in the shape shown in Fig. 26, being simply a box with two covers and no bottom. The under cover, which served as the seat, was hinged to the edge of the box, and the upper cover was hinged to the lower, so that they could be easily raised, singly or together, as desired, without interfering with each other. Under the seat, and standing upon the floor, was placed a galvanized

iron coal-hod. A tin pail full of dry, sifted earth stood beside it. When two or three inches of earth had been sprinkled upon the bottom of the coal-hod, the earth-closet was ready for use. The whole cost of the apparatus, including a large coal-hod, did not exceed $3.50, but it was as satisfactory as one could be. A small shovelful of earth was thrown in when the closet was used, and it was perfectly free from unpleasant odor, though it was daily used by several persons. The only attention it needed or received was to empty the hod when full.

"A somewhat more convenient shape for the box would have been to make it long enough to admit of partitioning off one end for an earth reservoir, as shown in Fig. 27. This would dispense with the pail for holding the earth, and render the whole apparatus complete in itself." R. T.

DEFECTS OF VISION. By Robert Bradwell Carter, F. R. C. S. McMillan and Company, London, publishers, 1877.

This is another happy effort of the author of a work on Diseases of the Eye, published in 1875. It is in the form of lectures, six in number, delivered before the Royal College of Surgeons of England, and is notable for its directness of purpose, the brief, yet thorough manner in which this subject is treated, and for the practical value of its contents.

The first two lectures definitely mark "the chief features of the three great factors of sustained vision—refraction, accommodation and convergence."

The dioptric system, the metric system in its relation to lenses, is explained, showing an advantage for it over the old system of inches, in the absence of fractions in necessary calculations, and in the greater regularity of the intervals between the series of lenses. It offers, too, a wider range of lenses, admitting of any useful combination. The author suggests that in prescribing glasses fitted by the French trial lenses, marked in inches, the prescription is for glasses in French inches, whereas the optician fills it by English measurement, thus giving rise to mistakes easily prevented by the new system.

He calls special attention to the difference between the terms *range* and *region* of accommodation; *range* meaning the *power*

of accommodation; *region*, "the limits of space within which the *range* is exercised."

The remaining four lectures are given to the consideration of presbyopia, myopia and hypermetropia, astigmatism, and asthenopia, the principal forms of "conditioned vision."

The subject of astigmatism is treated intelligibly, and is made very simple. All questions which perplex instead of assisting us are excluded. About one page of the volume is devoted to a thorough description of all the varieties of astigmatism, with the figures illustrating the subject. *Multum in parvo* seems to be the ruling principle.

The author is fair in giving to American ophthalmologists credit for what they have done, a rare thing in European writers.

The book is interesting, and one who reads it finishes with two feelings: the *first* is one of satisfaction that so much available knowledge is to be found in so small a compass; the *second* is a regret that more of the books written are not like it in brevity and excellence.

It is an octavo volume, which the publishers have sent out printed in clear, large type, on tinted paper, and neatly bound.

S. O. R.

SYNOPSIS OF THE DISEASES OF THE LARYNX, LUNGS AND HEART, COMPRISING DR. EDWARDS' TABLES ON THE EXAMINATION OF THE CHEST, WITH ALTERATIONS AND ADDITIONS. By F. DeHavilland Hall, M. D., London. J. A. Churchill, London, 1878.

This little book contains in a very concise form, and arranged in a manner easily available for the student, the information which usually fills a large volume. It is a chart for the student and practitioner, which will at once refresh their memories and point out thoracic disease in an unmistakable manner. In it the regions of the chest with their contents, and the physical signs of health and disease are so tabulated that their value may be appreciated at a glance; and the symptoms and signs of various diseases are compared, so as to make diagnosis easy.

A PRACTICAL MANUAL OF THE DISEASES OF CHILDREN, WITH A FORMULARY. By Edward Ellis, M. D., late Senior Physician to the Victoria Hospital for Sick Children, etc., etc. Third edition; pp. 390. Lindsay & Blackiston, 1878.

A very excellent little work, characterized by short yet faithful descriptions of disease. A book not large enough to contain all which might be said in regard to diseases of children, or indeed to treat any one disease in an exhaustive manner, but rather a work in which the great majority of children's complaints are truly and vividly portrayed with a practical, and, in the main, recent treatment. The author's aim, as expressed in his preface to the first edition, is certainly realized. It is "concise" and a "handy book of reference." The writer of this review has carefully read the book and will faithfully maintain his proposition with regard to its exceeding usefulness. A few, from the many very excellent sections will be briefly noticed, and with the earnest desire to aid the author in producing a perfect book, if another edition should ever be needed, we will venture a few suggestions.

The chapter on general management and diet is remarkably good and contains some suggestions which we have not noticed in other and larger works. In the list of foods for infants, however, we do not notice oatmeal; a fact which excites some surprise, for it certainly has an established reputation in babies' dietary.

The section on apnœa is hardly as complete as one could wish, the sthenic and asthenic varieties not being sufficiently differentiated to guide an inexperienced practitioner. In dressing the navel we are advised, as of old, "to wrap it in a piece of soft linen in which a hole has been made for it to come through." A more elegant procedure, and one equally safe, is to follow the directions of Prof. Goodell, of Philadelphia.

The description of malarial diseases in this work, and indeed in most books on diseases of children, will not suffice for this climate. We not only have an *intermittent*, but we have a *remittent* form of fever due to malaria, which is neither typhoid or associated with the typhoid condition. And we, perhaps, may say here, as well as at at any other place, that remittent fever in children is the disease above all others which we are liable to confound

with the first stage of tubercular meningitis. The author of this work speaks only of typhoid fever as a disease liable to be confounded with this terribly fatal meningeal inflammation.

The distinction between croup and diphtheria is very fully given, and, while recognizing the high authority of those who urge their identity, our author remains unconvinced. He confesses a family likeness between not only diphtheria and croup, but scarlatinous sore throat with patches of exudation. The asthenia, epidemy, and marked contagiousness of the first, compared with the sthenic, sporadic, and doubtfully contagious character of the second, are believed to mark two maladies. The use of the bichromate of potash is highly spoken of in diphtheria. The section on diseases of the heart is excellent. The chapter devoted to diseases of the food passages and abdominal organs, contains much which is valuable, although we must be allowed to differ with the author's classification and express surprise that so much space, comparatively, is given to gastritis, a disease of very rare occurrence, and such brief mention made of those very frequent and formidable diseases of children, indigestion and entero-colitis. The number of American vegetable remedies suggested and recommended is remarkable.

A few errors remain even in this third edition. The phrase "weak Condy's fluid lotion" appears two or three times; the word *when* is omitted at line 22 p. 287, and finally Dr. Eustace Smith is made to describe the "tongue of worms." C. W. E.

PRACTICAL CHEMISTRY FOR MEDICAL STUDENTS. Specially arranged for the First M. B. Course. By M. M. Pattison Muir, F. R. S. E., Prælector in Chemistry, Gouville and Gains College, Cambridge. London: Macmillan & Co. Chicago, Jansen, McClurg & Co. 1878. Cloth, pp. 64. 60c.

This is a little laboratory aid, and as such will be found very useful. We think it might have been made more serviceable by the introduction of formulæ. The bases are arranged in five groups, and the acids into six. The appendix contains the application of the various tests in a tabulated form, together with the tests for a few of the alkaloids. R. P.

BOOKS AND PAMPHLETS RECEIVED.

House Drainage and Water Service in Cities, Villages and Rural Neighborhoods; with Incidental Considerations of Causes Affecting the Healthiness of Dwellings. By J. C. Bayles, Editor of "*The Iron Age*," etc. Cloth, pp. 360. New York: Published by David Williams, 83 Reade street. 1878.

Lessons in Laryngoscopy; Including Rhinoscopy and the Diseases of the Throat. By Prosser James, M. D., M. R. C. P., Lecturer on Materia Medica and Therapeutics at the London Hospital; Physician to the Hospital for the Diseases of the Throat, etc., etc. Second edition, with colored plates. London: Balliere, Tindall & Cox, 20 King William street. Cloth, pp. 176. 1878.

Antagonism of Alcohol and Diphtheria. By E. W. Chapman, A. M., M. D., formerly Professor of Materia Medica and Therapeutics, etc., etc. Cloth, pp. 98. Union Argus Steam Printing Establishment. Brooklyn. 1878.

Ninth Annual Report of the State Board of Health of Massachusetts. January, 1878. Cloth, pp. 529. Boston; Rand, Avery & Co., printers to the Commonwealth, 117 Franklin street.

Practical Chemistry for Medical Students. By M. M. Pattison Muir, F. R. S. E., Prælector in Chemistry, Gonville and Gains College, Cambridge. London: Macmillan & Co., 1878; pp. 64, cloth. 60c.

Lectures on Clinical Medicine; Delivered in the Royal and Western Infirmaries of Glasgow. By Dr. McCall Anderson, Professor of Clinical Medicine in the University of Glasgow. With illustrations. London: Macmillan & Co., 1878. Cloth, pp. 264. $3.00.

Insanity in Ancient and Modern Life; with Chapters on its Prevention, By Daniel Hache Tulne, M. D., Fellow of the Royal College of Physicians. London. London: Macmillan & Co., 1878. Cloth, pp. 226. $1.75.

A Practical Treatise on Aural Surgery. By H. Macnaughton Jones, M. D., M. Ch., F. R. C. S. I. and Edin. Philadelphia: Lindsay & Blakiston, 1878. Cloth, pp. 172.

Manual of Operative Surgery. By Lewis A. Stinson, B. A., (Yale) M: D. With 332 illustrations. Philadelphia: Henry C. Lea, 1878. Cloth, pp. 477. $2.50.

Nervous Diseases, their Description and Treatment. By Allan M'Lane Hamilton, M. D., Fellow of the New York Academy of Medicine, etc., etc. With fifty-three illustrations. Philadelphia: H. C. Lea, 1878.

The Atlantic Islands as Resorts of Health and Pleasure. By G. S. W. Benjamin, Author of "Contemporary Art in Europe," etc., etc., etc. Il-

lustrated. New York: Harper Brothers, 1878. Cloth, pp. 274, $3.00. Jansen, McClurg & Co., Chicago.

Visions; a Study of False Sight. By Ed. H. Clarke, M. D.; with an introduction and memorial sketch by Oliver Wendell Holmes, M. D. Houghton, Osgood & Co., Boston, 1878. Chicago: Jansen, McClurg & Co. Cloth, pp. 315 $1.50.

Towne's Manual of Chemistry, Theoretical and Practical. Revised and Corrected by Henry Watts, B. A., F. R. S. A new American from the twelfth English edition. Edited by Robert Bridges, M. D., Professor of Chemistry in the Philadelphia College of Pharmacy; 177 illustrations. 1878. Philadelphia: H. C. Lea. Chicago: Jansen, McClurg & Co. Cloth, pp. 1027. $2.50.

Transactions of the American Gynæcological Society—Vol. II, 1877. Cloth, pp. 697. $6.50. Houghton, Osgood & Co., Boston. Jansen, McClurg & Co., Chicago.

Proceedings of Chicago Society of Physicians and Surgeons, 1874. Presented by Chicago Society of Physicians and Surgeons.

Sanitary and Medical Reports for 1873–4, by the Officers of the U. S. Navy. Prepared for publication under the direction of the Surgeon of the Navy. By H. C. Nelson, M. D., Surgeon to the U. S. Navy. Washington: Government Printing Office: 1875. Pp. 818. Presented by Chicago Society of Physicians and Surgeons.

Catalogue of the Library of the Surgeon General's Office, U. S. Army. 3 vols. Washington: Government Printing Office; 1874. Presented by Chicago Society of Physicians & Surgeons.

Cyclopædia of the Practice of Medicine. Ziemssen. Vol. XIII. Diseases of the Nervous System. New York: Wm. Wood & Co., 28 Great Jones street. Chicago: W. T. Keener, 94 Washington street.

Do Phosphureto de Tinco Sua Acçao Physiologico et Therapeutica. By Dr. D. A. Martins Costa. Rio de Janeiro, 1877.

Zur Behandlung der Blutungen nach Abort. Von Paul F. Mundé in New York.

Treatment of Chronic Aural Discharges. By Julian J. Chisholm, M. D. Read before the Baltimore Academy of Medicine. Revised from *North Carolina Medical Journal*, May, 1878.

On the Necessity of Caution in the Use of Chloroform During Labor. By W. T. Lush, M. D. New York.

Report on Monomania. By D. A. Morse, M. D., London, Ohio, 1874.

A Case of Vaginal Ovariotomy. By William Goodell, A. M., M. D., Philadelphia. Reprint from Vol. II, Gynæcological Transactions, 1878.

Case of J. W Finley, with Autopsy of the Brain. Read before the Iowa

State Medical Society, Iowa, Jan. 30, 1878. By Walter Hay, M. D., Dubuque, Iowa.

Amputations and Excisions of the Cervix Uteri; Their Indications and Methods. By J. Byrne, M. D., M. R. C. S. E., etc., etc. Reprint from Vol. II, Gynæcological Transactions, 1878.

Relative to the Work of Health Officers and of Local Boards of Health in Michigan. Circular No. 28, from the State Board of Health of Michigan

Relative to Notices of Diseases which Endanger the Public Health; Duties of Householders, Physicians and Others. Circular to Supervisors and other Officers of Townships, from the State Board of Health of Michigan.

Atlas of Skin Diseases. By Louis A. Duhring, M. D., Professor of Skin Diseases in the Hospital of the University of Pennsylvania, etc. Part III. Philadelphia: J. B. Lippincott & Co. Chicago: Jansen, McClurg & Co.

Du Petit Lait et du Lait dans la Phthisie Pulmonaire. Par Charles Paul Simon. Presented by Chicago Society of Physicians and Surgeons.

Einiges über Apoplexie. Presented by Chicago Society of Physicians and Surgeons.

Certain Symptoms of Nervous Exhaustion. By George M. Beard, Fellow of the New York Academy of Medicine, etc., etc. Read before the New York Academy of Medicine, April 4, 1878. Reprint from *Virginia Medical Monthly*, June, 1878.

The Illinois State Medical Register, 1878–9. Published annually under the supervision of the Chicago Medico-Historical Society, with the co-operation of the Illinois State Medical Society. Chicago List. Editor, D. W. Graham, A. M., M. D. Chicago: W. T. Keener, 94 Washington st.

Neuralgia and its Modern Therapeutics. By James A. Baird, M. D., Atlanta. Reprint from the Transactions of the Medical Association of Georgia.

The Functions of the Anal Sphincters, So-called. By James R. Chadwick M. D., Boston. Reprint from Vol. II, Gynæcological Transactions, 1877.

Cases of Double Uterus and Vagina. By James R. Chadwick, M. D. Read before the Obstetrical Society of Boston.

Transactions of the South Carolina Medical Association. Twenty-seventh Annual Session, held in Charleston, S. C., April 10 and 11, 1877. Charleston, S. C.: Edward Perry, Printer. Presented by Dr. Manning Simons.

Higher Medical Education the True Interest of the Public and of the Profession. An address introductory to the 112th course of lectures in the Medical Department of the University of Pennsylvania, delivered Oct. 1, 1877, by William Pepper, A. M., M. D, Professor of Clinical Medicine. Published by order of the Board of Trustees and at the request of the medical class.

Summary.

Collaborators:
DR. H. GRADLE, DR. L. W. CASE, DR. R. PARK,
DR. R. TILLEY, DR. D. R. BROWER.

PHYSIOLOGY.

ACTION OF HEAT AND COLD ON THE ORGANISM.—P. Delmas. (*Bull. de l'Acad. de Médecine, No.* 22.)

The author communicated to the *Académie de Médecine*, session of May 28th, a paper on this subject, of which the following is a résumé:

1st. Pending the administration of a cold douche, preceded or not by the use of heat, made at the temperature of 10° C. to 25° C. and of a duration from 30 seconds to five minutes, the central temperature of the body and that of the intermediary zone *are not at all or but very little lowered.*

2nd. While rest during the hours after administration of cold water does not facilitate the pretended reaction admitted by authors, and although the subject feels only a very moderate degree of heat, or of coolness, and sometimes even chills, the temperature of the central and intermediate parts lowers very little, or rises and passes that felt before the douche; the rapidity of the heart increases and the arterial tension remains very high.

3rd. Exercise following a cold douche has the true physiological result of bringing on persistent reduction of temperature and even a diminished rapidity of pulse and lowering of arterial tension.

4th. Under the influence of a cold application, the maxi-

mum and minimum of rapidity of the heart correspond to the maximum and minimum of arterial tension.

5th. After the application of a cold douche, the subject in reality cools, and his temperature lowers while he feels a sensation of heat, or, on the contrary, it rises or remains stationary when he has chills.

PHYSIOLOGY OF THE PANCREAS.—Affanassien and Pawlon. (*Pflüger's Archiv.*—Note in *Lancet.*)

The authors reasoned by analogy that this gland received special excitory fibers as well as a vaso-motor system of nerves. The existence of the latter is indubitable; that of the former they proved thus: control experiments made by testing the juice just after feeding and during fasting, showed that the secretion of fluid and solid constituents is due to two different processes, governed by two sets of nerves, by one of which the chemical work is regulated. Resorting to Heidenhain's plan, they injected atropine, and the secretion was either checked or inhibited. They consider this positive evidence of the existence of secretory nerves. They next proceeded to enquire whether, admitting the accuracy of Bernstein's statement that irritation of the vagus inhibited the pancreatic secretion, this inhibitory influence is due to direct action, or is referable to the pain caused by stimulation of the nerve. Their experiments satisfied them that sensory irritation of the skin was capable of inhibiting the secretion of the pancreas.

PRACTICAL MEDICINE.

SEA SICKNESS. Laederich. (*L'Année Médicale.*)

In answer to an anonymous writer, who speaks ironically of the application of collodion as a remedy against sea sickness, Dr. Laederich, a French army physician, strongly advocates its use, citing well marked cases in defense of his recommendation. He does not pretend to explain the theory of its action, but sees in it a resemblance to the belt which has been used in many cases to advantage, and is frequently recommended by sailors. Dr. L.,

moreover, looks upon an application of collodion over the epigastrium as a powerful anti-emetic in general, having used it and seen it used in several cases with decided benefit. He imagines that it would thus prove curative as well as preventive of sea sickness.

His method of using it is as follows; Before embarking the traveler should apply, with a soft brush, three successive layers of collodion containing castor oil, over the region of the epigastrium, being careful to pass beyond its anatomical region. As directions to his patients, he maps out the region thus: A horizontal line directly above the umbilicus; on the right and left two vertical lines, about five centimeters beyond the nipples; above, following the curve of the sides, and extending about three or four centimeters above the border. He further recommends those about to take a long voyage to take a supply of collodion with them.

THE NURSING OF CHILDREN.—(*La France Médicale*, p. 357, 1878.)

La Société de Médecine Pratique, through Dr. Brochin, lays down the following rules for the nursing of children:

1. The mother's milk is incomparably the best food for the infant.
2. A wet nurse is preferable to any kind of artificial nursing.
3. Artificial nursing should not be resorted to except in the impossibility of a supply from the mother or a wet nurse.
4. The nursing of a child, unless it is absolutely impossible, should take place in the house where the parents live, whether it is a question of wet nursing or artificial nursing.
5. When labor is completed, a rest of several hours is necessary for the mother. If she is capable of nursing her child, she should give it the breast from five to six hours after the termination of labor.
6. One or two teaspoonfuls of warm water, just a little sweet, should be given the child soon after birth. This practice clears the mouth and throat of mucus and facilitates the discharge of the meconium.

7. It is very desirable from the beginning to regulate the hours for nursing.

8. For the first fortnight it is not desirable to put the child to the breast, or to feed it, oftener than every two hours, and not less often than every three hours.

9. The child should be accustomed to nurse as little as possible during the night. Six or eight hours of uninterrupted sleep being necessary to both mother and child. The physician should decide when it is necessary to infringe on this and the preceding rule.

10. The two breasts should be given to the child alternately. This rule should be observed although he may manifest a decided preference for the one.

11. In case the milk of the mother or nurse is not sufficient, the breast and artificial nursing must be adopted.

12. Cow's milk must be employed fresh without ever being boiled.

13. It is customary for the first week to dilute the milk with three times its volume of water; during the rest of the month with one-half water; from the end of the first month to the end of the sixth month with one-quarter its volume of water; from the end of the sixth month to give it pure. For practical purposes it is sufficient to calculate the quality of the milk by the lactometer.

14. Whatever proportion of milk is used, it is desirable not to sweeten or salt it but very lightly. It should not be prepared but at the time when it is about to be given. It should be heated by placing the bottle in warm water until it has acquired a temperature of from 38° to 40° C.

15. The state of the stools of the child being the best sign of the digestion, it is very important that they should be examined every day. If they are thin, a little more milk should be added; if greenish, grumous, and if they contain undigested milk, the water should be increased.

16. The addition of anything in the way of a narcotic (syrup of poppies, soothing syrup, etc.) to the food is decidedly dangerous, and should be absolutely forbidden without the advice of a physician.

17. Only after the seventh month should the mother's milk or that of the wet nurse be insufficient, is it desirable to supplement the breast with boiled preparations of starch, such as the physician may recommend. This additional food should contain milk as the principal article. It should be always flavored with a little salt and less sugar.

18. Artificial feeding should be subject to the same general principles as the natural nursing.

19. Bottles provided with long tubes which necessitate the child to suck too long, and to cool the milk in its passage, should be discarded and short ones used.

20. Gum drops (suçons) which are frequently placed in the children's mouths to appease their crying, are dangerous, and should be absolutely forbidden.

21. When the child has satisfied its appetite, the bottle and tube should be cleaned immediately, taking its several pieces apart, washing each separately, first in warm, then in cold water.

22. Milk should form the child's food almost exclusively until the first twenty teeth have made their appearance.

23. The weight of the child constitutes one of the surest signs of the adaptability of the food used.

24. Weaning should never take place without the advice of the physician. The usual time for this is between the age of 12 and eighteen months. It is desirable to choose a time when the child is not harrassed by teething, and as far as possible to avoid the period of great heat.

25. The changing of the wet nurse does not endanger in the slightest degree the health of the child.

ACTION OF UREA IN THE BLOOD.—MM. V. Feltz and E. Ritter. (*Archives Générales de Médecine*, June, 1878).

'The authors give the result of experiments demonstrating that pure urea never determines convulsive accidents. Urea, injected into the blood is eliminated very rapidly by the urine, and when it exists in considerable quantities in the organism, it does not undergo, as is generally believed, a rapid transformation into carbonate of ammonia.

Dogs, which have been injected with urea, after tying the renal

vessels to prevent rapid elimination of the poison, did not present convulsive accidents more pronounced than others in which the same vessels had been tied without injecting urea. The convulsions observed after injection of urea were produced by an impure article containing salts of ammonia.

The authors offer the following conclusions: 1st. Pure urea, artificial or natural, injected into the venous system in very large doses, never produces convulsions; it is eliminated very rapidly by the secretions.

2d. There are, in normal blood, no ferments which convert urea into salts of ammonia; the rapidity of elimination cannot be regarded as the cause of this non-conversion, for one may, by suppressing the renal secretion, retard the elimination of urea without hastening the appearance of convulsions.

3d. The ureas, which in large doses caused convulsions, were always impure, containing ammoniacal salts, the presence of which is easily proven by the reagent of Nessler.

SPERMATORRHŒA AND IMPOTENCE CAUSED BY TAPE WORM. —Houzé. (*Journal de Médicine et Chirurgie Pratique*).

M., 28 years old, has always led a moderate life; no abuse either alcoholic or venereal; never suffered from any affection of the genital organs, health has always been good and functions normal.

In the month of June, 1877, M. perceived that his erections were incomplete; fifteen days afterwards, absolute impotence.

He consulted a physician who prescribed a stimulating diet and some pills. No benefit. Soon after he was afflicted with frequent nocturnal emissions resulting in a very decided lassitude. Defecation caused an expulsion from the meatus of a liquid which was probably prostatic.

His strength diminished rapidly and he became very despondent.

At the expiration of two months he arrived at Paris where a specialist cauterized the prostatic portion of the urethral canal. This was followed by a somewhat violent inflammation. For eight days a mixture of blood and pus was discharged from the

urethra. The purulent discharge ceased, but the impotence and the spermatorrhœa persisted.

Houzé saw the patient Nov. 17, 1877. His color was pale; air, sad; eye, restless; speech, spasmodic; respiration, frequent and irregular. Nothing abnormal with the lungs; a slight anæmic murmur was heard at the heart; no pain in the spinal column; catheterism of the canal easy. The finger introduced into the rectum gave no indication of enlargement of the rectum. The inguinal regions revealed nothing abnormal.

Occipital headache; flying pains in the chest; sight diminished and indefinite; moving spots visible; eyelids disturbed with spasmodic twitchings; pupils dilated; hallucinations both of sight and hearing.

He decided to treat him according to symptoms, and prescribed a good nitrogenous diet, iron, cinchona wine, and for the impotence the following pills:

Powdered nux vomica,.....	50
Ext. of gentian (sufficient).....	
Make ten pills. Take two a day.	

Eight days after, he was rejoiced to inform us that his impotence had disappeared. We continued the same treatment and give in addition a cold douche; allow moderate coition.

The following week, same state and same treatment continued.

Lallemand found in a great number of observations spermatorrhœa to have been the result of intestinal parasites—ascaris vermicularis, and lumbricoides, which disappeared under the influence of anthelmintics.

A decoction of 60 grams of pommegranate bark taken fasting, and three hours later, 30 grams of castor oil brought away five meters and a half of tape worm in several pieces. The following night M. had three polutions.

Since this period the seminal losses have disappeared, the erections are normal; and under constitutional treatment the general vigor appeared forthwith; the sight was restored immediately and the disposition became gay as usual.

The urine examined by the microscope Feb. 5, 1878, did not reveal spermatozoa. In fact, M. at this time was quite cured.

From this it appears that the cause of all these symptoms was the tape worm which had not caused any disturbances of the digestion.

ON SOME FORMS OF CHRONIC CATARRH OF THE STOMACH. Wm. B. Neftel. (*Medical Record*, June 8, 1878.)

The doctor concludes his article with the following propositions:

The local effects of chronic catarrh are—

1. Fermentation in the stomach (butyric acid) with evolution of gases (inflammable) and formation of fatty acids (butyric, lactic, acetic.)

2. Dilatation of the stomach (gastrectasia) and impairment of its peristaltic movements.

3. Stagnation of the food in the stomach and atonic condition of the bowels.

4. Gastric pains and vomiting.

The general effects of gastric catarrh are emaciation and general anæmia from the defective nutrition of the system, especially anæmia of the brain, causing vertigo and other cerebral symptoms.

The diet of those affected with chronic gastric catarrh, though simple and easily digestible, must not be too uniform, and pure water can be used *ad libitum*.

The principal indications in treatment are—

1. To arrest the fermentation by anti-fermentatives, chlorine, fresh prepared according to German pharmacopœia, thymol (very small doses) salicylic acid, hydrochloric acid, etc.

2. To treat the gastrectasia and the atonic condition of the bowels with induced currents. (The "fluctuating induction current," by aid of broad flat electrodes applied to remote portions of the stomach, with the intensity of the current gradually increased from minimum to its maximum, and after several seconds duration again diminished to its minimum. This is repeated fifteen to twenty times in succession, with a pause of several seconds between. The "tetanizing induction current," by applying the broad electrode to one portion of the stomach, the current being of maximum intensity, and suddenly pressing a smaller electrode against the opposite portion for several seconds, then

suddenly removing it, and, after a short interval, repeating the process for fifteen or twenty times.)

3. To excite the secretion of a healthy gastric juice by the use of alkaline waters before meals (Vichy, Carlsbad), small doses of rhubarb (gr.i four times a day); bitter remedies, etc. (nux vomica, etc.)

4. To improve the digestive properties of the gastric juice by the administration of hydro-chloric acid, not only to dyspeptics but also to anæmic persons generally. A. H. F.

THE CONNECTION BETWEEN PRURITUS VULVÆ AND DIABETES.—Wiltshire. (*Lancet*, Apr. 13.)

The author calls attention to the frequent association of diabetes with pruritus vulvæ, and the desirability of examining the urine of patients suffering from this annoying malady. Aside from the itching, there may be no other symptom of diabetes, and it is not surprising, therefore, that the true condition is overlooked. In his cases, the most successful treatment for the local symptom was a simple borax lotion.

TREATMENT OF OBSTINATE HICCOUGH.—Favier. (*La France Médicale*, May 1st, '78.)

The author reports a very obstinate case of hiccough which persisted for fifty days, resisting all treatment, and which was finally cured by compression of the epigastrium. The instrument employed was Petit's tourniquet, and the hiccough ceased five minutes after its application. At first suspension of compression was followed by return of the complaint, but finally it disappeared altogether.

CASE OF INTESTINAL OBSTRUCTION CURED BY INJECTION OF GAS.—Aribund. (*Lyon Médical, No.* 21, 1878.)

The patient, a dyspeptic, after hepatic colic, had for four days been suffering from symptoms of intestinal obstruction; alimentary and bilious vomiting, no fæcal matters, intestinal pains, total absence of stools, or of gas by anus, abdomen tympanitic, but slightly painful, slight fever; his physician had vainly given several purgatives; baths had been tried and ointments and cata-

plasms to the abdomen. Croton oil was tried without effect, and the author advised the injection of gas by means of a long canula attached to an artificial seltzer water apparatus. The canula was introduced deeply and at the moment of entrance of the gas the patient felt, as had been expected, a sensation of something tearing inside, accompanied by pain so violent as to cause him to jump out of bed. At the end of some seconds the pain moderated, he lay down, and twenty minutes afterwards, an abundant escape of gas put an end to these alarming symptoms. There remained but a slight amount of gastro-intestinal irritation, the consequence of the purgatives he had taken.

Surgery.

Artificial Emphysema as an Aid to Operation.—(*Archives de Méd. Navale*, No. 2, 1878.)

Dr. Roucière resorts to this measure to dissociate and isolate the different layers of superficial or deeper tissues, for the purpose of facilitating operations, such as discovery of vessels, enucleation of tumors, strangulated hernia, etc. In the hospital of Buenos Ayres it is thus performed: The skin is perforated with a trocar in the vicinity of the site of operation; to the canula is attached a suitable air pump apparatus. The tissues in the neighborhood are compressed, to avoid undue diffusion of the emphysema, and sufficient air driven in to distend the cellular tissue to the desired degree. The process is said to be free from bad results.

Compression of the Common Iliac.—Davy (*Br. Med. Jour.*, May, 18, 1878.

An account of a new method of compressing this vessel is related by Davy in a clinical lecture on amputation at the hip joint.

The rectum being empty, an enema of sweet oil was given. Then a smooth, straight, round lever of wood was introducep into the gut, the small end applied over the common iliac between the lumbar bodies and *psoas magnus* muscle, the projecting part

of the lever being nearly parallel to the opposite thigh. The artery is easily compressed by elevating the projecting arm of the lever, the perinæal tissues acting as a lever. By this means the pulsations of the femoral may be caused to cease.

This is a less serious measure than compression of the abdominal aorta, the general circulation is far less disturbed, a simple straight lever suffices for apparatus, and no danger results to the rectum if the lever have been properly used. Mr. Davy also demonstrated how this method of compressing the iliacs, or even the aorta, might be utilized in many operations of pelvic surgery.

AMPUTATION OF PENIS.—Stocks.—(*Br. Med. Jour.*, May 18, 1878.)

At the April meeting of the Manchester Medical Society, Mr. Stocks described a new method of operating, as follows: A narrow bladed knife is passed between the corpora cavernosa and the corpus spongiosum about an inch behind the diseased part and the former bodies divided directly upwards. The knife is then placed in the bottom of the wound and carried directly forward about four lines, and then diagonally forwards and downwards, forming an inferior flap. The urethra in this locality is then freed from the corpus spongiosum and slightly loosened from its attachments. The skin flap is turned upwards, a small button hole made in it through which the loosened urethra is drawn by forceps and so held until the flap is adjusted and secured. The cut end of the urethra is afterwards stitched to the edges of the button hole. Any redundancy of integument forms an admirable foreskin to protect the tender urethral orifice, and is easily drawn back so as not to form impediment to micturition.

Mr. S. exhibited a case in which this method had proved quite successful.

NERVE SECTION FOR ELEPHANTIASIS. — Morton. (*Phila. Med. Times*, Jan. 19, 1878.)

Dr. Morton, during December, '74, tied the femoral artery of a colored patient suffering from an extreme case of elephantiasis arabum. The patient was discharged in March much benefited.

He returned, however, Nov., '77, for further treatment, desiring an amputation, the leg measuring 21 inches in circumference. Having noticed the frequency with which nerve section is followed by atrophy of parts supplied by that nerve, Morton determined to attempt the production of artificial atrophy in this case. Accordingly the right sciatic was laid bare, and an inch and a half of its length exsected from the upper part of the thigh.

No untoward symptoms followed. There has been a steady diminution in size ever since, and the thick skin has desquammated, leaving soft pliable skin beneath, while there has been no tendency to ulceration.

This is, so far as known, the first conception and performance of this comparatively simple means of effecting relief in a most troublesome and loathsome malady.

NEW METHOD OF TREATING VARICOCELE.—Bradley. (*Br Med. Jour.*)

The author explains his process as follows: Pass a long and strong hare-lip pin between the veins and scrotal walls, bringing the point close beneath, but not through, the scrotum; then make the point retrace its course, but passing now behind the veins until it emerges near the puncture through which it entered. The varicocele may thus be effectually compressed, and the veins obliterated.

ABORTIVE TREATMENT OF BUBO.—Malplaquet. (*L'Union Médicale, No.* 53, 1878.

By means of vesicant fluid, the epidermis is removed the size of a franc over the seat of the swelling. Upon this denuded surface a piece of lint is laid, soaked in a saturated solution of bi-chloride of mercury, and over the whole is laid a flaxseed poultice, which is left on about twenty-four hours. At the end of this time a gray eschar is seen, and after the poultices have been applied two or three days, there only remains a slight depression with granulated surface which heals readily by simple dressings. The mercurial lotion gives sharp pain for a short time, but in twelve cases treated in this way the best of results have been obtained.

OSTEO-MYELITIS DURING GROWTH. M. Lannelong. (*Bull. de l'Acad. de Méd. No.* 22).

1st. The affection described by authors under the names of acute necrosis, acute periostitis, phlegmonous, epiphysiary osteitis, etc., is in reality acute osteo-myelitis.

2d. The long bones are most exposed to it, but the short bones are also exposed.

3d. In the long bones the primitive seat is found in the line of union of the diaphyses with the epiphyses; the cartilage remains intact in 15 to 20 per cent. of the cases.

4th. One of the earliest consequences is a separation of the periosteum with subperiostic abscess.

5th. Parallel with the necrosis and thinning of the bone, a work of reparation takes place which ends in the formation of a new bone.

6th. Articular complications do not always exist; their appearance renders the prognosis of the affection more grave.

7th. When the diagnosis is established, trephining is the only method of which the opportunity and the indications are undeniable.

DRAINAGE OF THE BONES IN NECROSIS AND OSTEO-MYELITIS. Armand Deprés. (*L' Union Médicale, May* 23, 1878, p. 787.)

1st. In osteo-myelitis with spontaneous fracture of the long bones, whenever the articulations are intact, the limb should be preserved by the aid of an incision reaching to the bone, according to the precepts of Smith, Broca and Gosselin, by removing constrictions over the abscesses and by passing in a drain to the seat of fracture through the open abscesses around the bone.

2d. The drain should be left in place a year, so as to place the central necrosis of the bone in the condition of a superficial necrosis, at the bottom of a wound of the integuments with loss of substance.

3d. The drainage of bones affected with osteo-myelitis, like disarticulations practiced in the same conditions, as an operation which may be done while the patients have fever; but the grav-

ity of the drainage, equaling that of an opening of an abscess, is less than that of disarticulation, and aside from other reasons should cause the drainage to be preferred.

ERGOTINE IN STRANGULATED HERNIA.—(*L' Union Médicale du Canada, June* 1878, p. 262.)

Two cases of strangulated hernia successfully treated with ergotine are reported in *Bordeaux Médicale* (author's name not given). In both cases other means had failed, and an operation was contemplated.

The skin over the tumor was first washed with an alkaline lotion to facilitate absorption, and then annointed with pure ergotine every two hours, at the same time tablespoonful doses of a solution containing ʒiss of ergotine to ʒiv of the vehicle, were given every hour. Four or five hours after beginning treatment the vomiting and pain lessened and the tumor diminished, and in twelve hours the hernia reduced itself. The author attempts no explanation of the mode of action of ergotine in these cases, but recommends further trial.

APPLICATION OF LIGATURES AFTER CASTRATION.—Novel method of performing phimosis.

In the surgical section of the Parisian Academy of Sciences, under the Presidency of M. Tarnier, the general subject of ligation after the removal of the testicle was discussed. Four of the six surgeons who took part in the discussion, gave their opinion decidedly in favor of the separate ligation of the vessels. The objections urged to the tying *en masse* were:

The danger of tetanus; tumefaction of the cord, and the greater time that elapses before the ligature becomes disengaged.

In the same section, Dr. Hue, of Rouen, read a paper on the performance of phimosis by an elastic ligature. He passes a needle, armed with an elastic thread, through the prepuce at the base of the glans penis on the dorsal surface; then ties it, comprising in the ligature that part of the prepuce in front of the perforation. In three or four days, says M. Hue, the section is complete. There is very little pain. He has seen the operation

performed in all, eighteen times, and it is equally applicable to children or adults. In point of æsthetics, says M. Hue, the final result is more elegant.

OBSTETRICS.

INJECTION OF MORPHINE IN INCOERCIBLE VOMITING OF PREGNANCY.—Chabalier. (*Lyon Médical*, No. 22, 1878.)

The author describes an aggravated case of this affection, in which after the unsuccessful use of all the known means, he resolved to make use of hypodermic injections of morphine before the last resort, abortion. The patient was two and a half months pregnant. He injected the first time a little less than 0.016 Gm., which was followed by almost immediate relief; vomiting ceased and the patient was able to retain porridge, the first time in two months. But after the effect of the morphine had worn away, vomiting recommenced three or four hours after the injection. He continued its use, however, in doses of a little more than a third of a grain (2½ centigrams) morning and evening for two months, until the first movements of the child were felt. After each injection the patient was able to eat a tolerably good meal of soups, vegetables, meats, etc., and keep them sufficiently for maintaining nutrition. Vomiting came on several hours after the injections, but food was not vomited. On two occasions, wishing to suppress the morphine, and hoping that the moral effect would suffice, the author tried once pure water, and another time cherry laurel water; both times, although ignorant of the deception, the patient immediately vomited the food she had taken. Another time two drops of a one per cent. solution of atropine was used instead, which determined the most painful nervous excitement, which lasted all day, and aggravated the vomiting. At the end of four months and a half, on suspending the injections, the patient suffered all the effects of morphinism. For three days and nights she was in an indescribable state of agitation and excitement. There was absolute insomnia, and incessant involuntary movements of the limbs and body. At

the end of this time all ceased, and the pregnancy pursued its normal course without accidents. Labor was natural, and the child presented no appearance whatever of having been affected by the action of the morphine.

The author has since tried this plan of treatment in two cases less severe, with the same success. He is convinced that if the method be courageously resorted to, not fearing the dose injected, the physician will not find himself disarmed before so grave an affection.

ECLAMPSIA RELIEVED BY INTRA-VENOUS INJECTION OF HYDRATE OF CHLORAL. (*Ampiteatro Anatomico.*)—M. Bellmunt having failed to relieve a patient suffering from eclampsia by the internal administration of chloral hydrate, obtained speedy relief from an intra-venous injection of from 0.50 to 1 Gm. A dead fœtus was removed by forceps the same night but the mother made a good recovery.

GYNÆCOLOGY.

THE INFLUENCE OF THE UTERUS IN EYE DISEASES. Swanzy. (*Obstetric Journal*, May, 1878.)

The author read a paper with this title before the Obstetric Society, of Dublin. The first disease which he mentioned, as probably having its cause in the uterus, was iritis, occurring in girls from the eleventh to the seventeenth year. He had seen but few cases, but in these few he could trace no other cause; iritis is extremely rare at this age, unless depending on syphilitic or corneal diseases, and he had never seen similar cases in the male. In all these cases there was little or no pain, vascular injection or photophobia. The anterior chamber usually remained clear, and there was no deposit upon the cornea, but there was a tendency to formation of posterior synechia. Indications that the ciliary body and the choroid were implicated were also present. The affection was slow, difficult to cure, and apt to recur. The gravest uterine symptom he had discovered was insufficient menstrual flow.

Retinitis and optic neuritis may depend on disturbances of menstruation. Mandelstamm, Von Graefe and Mooren had seen such cases, and he was of the opinion that retroflexions and ovarian tumors might play a role in their ætiology.

Retinal appoplexies are sometimes the consequence of cessation or suppression of the menses. Liebreich had described and figured such cases, and the author had observed them.

Atrophy of the optic nerve had been repeatedly noted by Pagenstecher as occurring in women who suffered from severe menstrual disturbances.

That form of asthenopia called kopiopia hysterica must now be considered as simply a symptom of uterine disease. Förster had described it at length and Freund had invariably found *post mortem* that pathological uterine lesions accompanied it. Patients complain of inability to use their eyes for near work owing to darting pains, and these pains are augmented by any depressing circumstances; they are troubled with photophobia, especially of artificial light at night. No organic disease of the eye exists, but hypermetropia or insufficiency of internal recti may mislead the surgeon. The eyes are never injected, there is no swelling of the lids, no epiphora; such patients have good and bad days, and before and during menstruation such symptoms are more severe. According to Freund the uterine lesion was a chronic inflammatory process attacking the parametrium, sometimes producing atrophy of that tissue with various displacements. The course is a long chronic one; painful regions are often found in the pelvis, and there is more or less venous congestion of the vagina, with chronic metritis, catarrh and ulceration. The best treatment is attention to the general health.

Besides the five affections metioned above as apparently depending on uterine derangement, it was probable that others might be mentioned, but the author did not wish to fall into the error of regarding every eye disease as dependent upon such derangement merely because it happened consentaneously.

SALICYLIC ACID IN LEUCORRHŒA. (*L' Union Méd. du Canada*, June, 1878.)

In the *Revue Medico-Chirurgicale* of Buenos-Ayres, Dr. Y.

P. recommends the use of salicylic acid in this affection. The author says he has employed injections of the acid with completely satisfactory results for chlorotic women of lymphatic constitution, in vaginitis, in discharges from the uterine mucous membrane in which the irritant fluid produces erosion of the neck and vulvar inflammation. His formula is the following: salicylic acid 6 Gms., glycerine 100 Gms. Dissolve over water bath and add a liter of water (for six injections, one a day).

In case of uterine leucorrhœas an irrigating apparatus should be employed so as to project a small quantity into the uterus. The solution of the acid should be complete, otherwise the undissolved crystals might be irritating. The glycerine facilitates solution.

In a case that had resisted other treatment, a tampon of cotton, soaked in a two per cent. solution of salicylate of zinc was left in the vagina 24 hours, after which a one per cent. solution of the same salt, containing a little morphine, was used three times a day for a week, by injection, and followed by complete cure.

Ophthalmology.

Drainage for Detached Retina.—Cohn. (*Deut. Zeit. f. Pr. Med.*)

The author gives a summary of our knowledge and treatment of this disease. Arlt and others have tried to cure it by piercing the sclerotic. Graefe did this and divided the retina. But inflammation is liable to follow either of these measures. Pressure and confinement in a dark room occasionally yield good results. In 1877 Wecker suggested the introduction through the sclerotic, and under the retina of a gold thread as a means of drainage. In four cases Cohn has tried it, and with excellent results. As soon as the retina becomes attached again, perception is restored, and this has happened even after a lapse of three years; the perception of space only, however, and not that of color. In no case was any inflammation aroused, or any harm done; nor does the method interfere with other treatment.

Materia Medica and Therapeutics.

The Explanation of Morphia Myosis.—Picard. (*Med. Press & Circ.*, May 22, '78.)

At a recent meeting of the Biological Society of Paris, Picard attributed the contraction of the pupil under the influence of morphia to paresis of the sympathetic; for if the submaxillary gland is bared, and a small vein opened, the flow of blood is increased after an injection of the drug. Hence he concludes that it produces diminution of power of the great sympathetic.

Alcohol.—Carpenter. (*Br. Med. Journ.*, May 18, '78.)

For the subject of the annual oration before the Medical Society of London, Dr. Alfred Carpenter, the orator, selected the important topic of Alcoholic Drinks, in their various relations. We abstract the following points, relating principally to their physiological action.

In reply to the often asked question whether force can be produced by the ingestion of alcohol, after a careful review of both sides, he takes the affirmative, seeing no other explanation of the fact that many lives have been prolonged for months without other nourishment than that contained in spirituous liquors. He alluded to the fact that when dilute solutions of about the strength in which it would be found in the body, say 1 to 1,000, are passed through six inches of silicated carbon filter, the alcohol is metamorphosed into complex products, especially glycol, which should be considered one of the saccharine group. If this be a possible contingency, it may be transformed into force in the human economy under certain unknown circumstances, and as such be useful without danger as a luxury.

He inclined to the belief that the statements that alcohol acts upon the blood corpuscles and on the fibrin of the liquor sanguinis, were true. It is said that 1 part to 500 of blood interferes with the power of the blood to absorb oxygen (hence the purplish color of countenance of the bloated drinker); that it abstracts water from the blood-discs, and makes them adhere,

and that it causes coagulation of the plastic elements of the blood, which thus collects in the capillaries, while the current may even thereby be stopped.

By such means the free administration of alcoholic stimulants to the weak or debilitated, especially after hæmorrhage, etc., has led to embolism; or a clot would rapidly form in the heart, and the patient die. Such cases of embolism may get better, provided their alcohol be discontinued. Observation also shows that the elimination of carbonic dioxide is decreased after the imbibition of alcohol. These are undisputed facts with reference to large doses, but it does not follow that the weaker drinks, such as wine or beer, must cause such results.

It appears to be true that when once the system has been exposed to the full influence of alcohol, such as to cause results as above, then, but not till then, a cumulative action may begin; an action which shall develop an instinctive desire for more.

According to its dilution, alcohol passes rapidly through membrane, acting upon it in its passage; it is thus quickly conveyed to all parts of the system, and we cannot predicate where it will produce its first effect. Slight changes in the blood and tissues are not noticed, but when the altered blood corpuscles attain a certain percentage of the whole number, evil must result. Coagulated fibrin may be removed in small quantities, but it will soon gravitate, if not removed, into some organ, and impede circulation, giving thus the impetus to grave organic changes.

Alcohol invariably reduces temperature; an intoxicated man whose temperature is normal, or above normal, should be regarded as having some organic disease to account for it.

Referring to the after effects, he laid special stress on the alteration of tissues and accumulation of waste products, thus giving rise to various symptoms ascribed to, or diagnosed as neuralgia, rheumatism, rheumatic gout, spinal irritation, etc. If those cases of so-called rheumatic pains, which are relieved by the use of stimulants, were persuaded to drop them, and abstain entirely, their pains would, after the lapse of a few weeks' suffering, vanish entirely.

The principles of treating cases of alcoholism are, besides imperative self-control, first, restoration of digestive power—a

difficult and tedious matter; then the restoration of the altered glands and tissues to their normal condition. The hallucinations and delusions which often accompany the disease are associated with capillary dilatation; and, as a sequence, there is pressure on nerve substance, with risk of subsequent atrophy or degeneration.

Those cases of fever which require alcohol in their treatment are marked by dry tongue and skin, and no indication of cerebro-spinal lesion. When a case is benefited by it, there is soon a lessened temperature, slower pulse, moister tongue and generally quieter condition.

Temporary administration may be resorted to when the surface has been chilled, or the powers of life weakened so that the heart is inadequate for its work. Its action then is like taking the pendulum off the clock—the spring is able to work so much faster.

The speaker concluded with the remark that alcohol was a good medicine, but a poor diet, and its action as a poison, visible in all ranks of society.

THE ACTION OF SCILLA. — Huseman. (*Deutsche Med. Wochens.—Practitioner*, May, 1878.)

While squill is one of the oldest known remedies, its mode of operation is still unknown. No alkaloid has yet been extracted from it, but it yields a substance resembling digitalin, which retards the action of the heart, without any inflammatory action upon stomach or intestines. Its emetic action it possesses in common with all cardiac poisons. In frogs it first induces slowing of the pulse, then arrest of the ventricle, arrest of the auricle and complete loss of irritability of the heart. The cord, nerves and muscles retain their excitability so that the animal can leap. In warm-blooded animals the double action characteristic of cardiac poisons is exhibited—upon the inhibitory nerves and upon the cardiac muscle itself. At the commencement of its action, it strengthens the heart's action, like all cardiac poisons (digitalis, etc.), and hence its diuretic action. It also at first increases arterial tension, and is therefore contra-indicated when this condition exists. The author never observed any trace of

kidney inflammation, or anything which might suggest that squill was a direct stimulant to these organs. He was also unable to observe any indication of its possessing an expectorant action. In former times the dose was much larger than at present.

THE ACTION OF POTASSIUM SALTS.—Buchheim. (*Med. Chir. Rundschau.—Practitioner*, May, 1878.)

The action of the potassium salts differs much according to their diffusibility, the nitrate being readily diffusible, the sulphate and bicarbonate least so. With regard to the most easily diffusible salts, they overcome the arterial pressure of the capillaries of the stomach, causing the blood-corpuscles to accumulate in them, so that ecchymoses occur, or gastritis. These symptoms are less marked during digestion, or when the salts are in a state of dilution. The less diffusible salts pass into the small intestine, where they induce peristalsis, and are eliminated only after partial absorption. The sulphate forms the transition between the two groups. Potassium carbonate in large doses acts as a caustic on the mouth and stomach; in the stomach is converted into a bicarbonate, and only acts as an aperient when the intestinal mucous membrane is very sensitive.

According to investigations, the ashes of blood serum contain only sodium salts, of blood corpuscles only potassium salts, while those of the albuminous tissues contain chiefly the latter; so that the amount of potassic salts circulating in the blood is small, and all that is not combined must be quickly excreted by the kidneys. Hence the ingestion of considerable quantities must have marked effects—these are retardation of the heart-beats and final arrest in diastole. In frogs, muscular contractility is abolished, the excised heart stopping quickly in dilute potassium solutions—more slowly in those of sodium salts. The paralysis of the heart observed after injections of potassium salts is not a specific effect—as according to Podcopaew; but the direct action upon the first muscle with which they come in contact. Certain nerve-centers are similarly paralyzed with the muscles, in consequence of similar chemical composition. Death occurs, at times, however, before the occurrence of recognizable changes, because slight disturbance of these organs is enough to endanger life.

INDIAN HEMP IN MIGRAINE. (*L' Union Médicale du Canada, from Nice Médicale.*)

M. Seguin employs this remedy with success. The principle of this treatment consists in maintaining the nervous system under the slight influence of this medicine for a long time, as with the bromide in epilepsy. Two centigrams of the alcoholic extract are given to women before each meal. With men one may begin with three centigrams, finally four. In more than half of the cases the patients have been considerably benefited; some were completely cured. It may be said in conclusion, that Indian hemp has upon migraine the same influence that the bromide has upon epilepsy.

DR. M. MANNHEIMER, of Chicago, has accomplished results in the treatment of whooping cough, which are of interest when considered in connection with an article on the same subject which we publish on another page. Dr. Mannheimer has employed intralaryngeal insufflations of a fine powder, composed of equal parts of the sulphate of quinine and white chalk. In nine cases the results were as follows:

No.	Age.	Stage.	No. of Applications Daily.	Duration of Disease.	Remarks.
1..	5 years...	Spasmodic	1	5 days.	
2..	5⅓ years.	Spasmodic	1	6 days.	
3..	7 years...	Spasmodic	1	4 days.	
4..	6 years...	Spasmodic	2	7 days.	
5..	12 years...	Catarrhal.	2	7 days.	
6..	16 years...	Spasmodic	2	4 days ..	Syncope with each parox.
7..	4¾ years.	Catarrhal.	2	6 days.	
8..	5¼ years.	Catarrhal.	2	7 days.	
9..	6¾ years.	Spasmodic	2	8 days.	
				54 days.	

It will be seen that the average duration of the disease, under this treatment, was six days.

Items.

THE LAST ISSUE of the *Cincinnati Lancet and Observer* announces the consolidation of that journal and *The Clinic*. The combination will be known as *The Cincinnati Lancet and Clinic* and will be under the control of the efficient editors of the two journals: Dr. J. G. Hyndman, of the *Clinic*, and Dr. J. C. Culbertson and Dr. T. M. Stevens, of the *Lancet and Observer*.

TO SUBSCRIBERS.—We frequently receive letters announcing that a certain number of the JOURNAL has not been received and, on referring to our books, we find that the subscriptions of the writers of these letters have not been paid. Of course mistakes will occur and some of our subscribers who have paid, may occasionally be overlooked; but if every one would look at his receipt before sending for missing numbers, and to such intimation add the amount of his subscription, it would greatly facilitate the business of the publishing office.

THE TRADITIONS OF THE PAST are fast dissolving in the retorts of the modern investigator. And now come Foersch, Horsfield and others who show that the upas tree (antiaris toxicaria) is far from possessing the deadly qualities which it has so long possessed in English metaphor. The pestiferous influences which it was once supposed to exert, really originated in the sulphurous and other vapors emitted from the volcanic regions in which the upas tree is discovered. It is true that the branches, flowers and inner bark of the young trees may excite itching of the skin when handled, and the dried juice mixed with other ingredients, forms the poison in which the natives of the Indian Archipelago dip their arrows. Travellers have, however, considerably exaggerated the effects produced by wounds from these medicated darts. It is quite certain that the statements are gross exaggerations which describe the plant as growing in a desert tract with no other plant near it for ten or twelve miles, criminals offered a

pardon if they would collect its poison, the ground in its vicinity strewn with the bones of those who ventured too near, and the destruction of birds, fish, and vermin within a large area over which the effluvium of the upas tree was supposed to extend.

THE *Pacific Medical and Surgical Journal* says: "Chicago must be a paradise for ignorant druggists. The CHICAGO MEDICAL JOURNAL tells of one who pursued the business of a druggist in order to sell liquors, and who dispensed strychnine instead of arsenic, nearly killing the person who took it. * * * What is the Chicago College of Pharmacy about?"

The Chicago College of Pharmacy, we believe, is about its own business, and is nowise responsible for ignorant druggists in *Dover*, Ill. This is the name of the place given by us in connection with the above story. It was not Chicago, for here such sham druggists could not live twenty-four hours.

KARL ROKITANZKY, Professor of Pathological Anatomy at the University of Vienna, died at Vienna on the 23d of July. Rokitanzky was born in Kœniggrætz, Bohemia, February 19, 1804. Having received a liberal education at his native place, he studied medicine in Prague and Vienna. At the latter place he graduated in 1828, established himself as "Privatdocent" in 1832, was made *professor extraordinarius* in 1834, and elected *professor ordinarius* of pathological anatomy in 1844. His professorship gave him the full control over the dead-house of the Vienna General Hospital, where vast material offered a rare opportunity for scientific researches. How well he has understood to utilize this material is shown by his numerous contributions to medical journals, but chiefly by that standard work on morbid anatomy which carried his fame all over the world. This "Handbook of Pathological Anatomy" was published in Vienna, between 1842 and 1846, in 3 volumes, translated into English by the Sydenham Society, 1845 to 1850. Rokitanzky is the founder of the "New Vienna Medical School," which justly attracted numerous students from all parts of the globe, for seldom one school can boast of such a galaxy of names as Rokitanzky, Skoda, Oppolzer, Hebra, Schuh, Dietrich, Hamernjk and others.

ANNOUNCEMENTS FOR THE MONTH.

SOCIETY MEETINGS.

Chicago Medical Society—Mondays, Aug. 5 and 19.
West Chicago Medical Society—Mondays, Aug. 12 and26.

CLINICS.

MONDAY.

Eye and Ear Infirmary—2 to 3 p. m., Ophthalmological, by Prof. Holmes; 3 to 4 p. m., Otological, by Prof. Jones.
Mercy Hospital—2 to 3 p. m., Surgical, by Prof. Andrews.
Rush Medical College—2:30 p. m., Dermatological and Venereal, by Dr. Hyde.

TUESDAY.

Mercy Hospital—2 p. m., Medical, by Prof. Hollister.

WEDNESDAY.

Mercy Hospital—2 p. m., Eye and Ear, by Prof. Jones.
Rush Medical College—4 p. m., Diseases of the Chest, by Dr. E. Fletcher Ingals.

THURSDAY.

Mercy Hospital—2 p. m., Medical, by Prof. Davis.
Rush Medical College—1:30 p. m., Neurological, by Prof. Lyman.
Eye and Ear Infirmary—2 to 3 p. m., Ophthalmological, by Dr. Hotz.

FRIDAY.

Mercy Hospital—2 p. m., Medical, by Prof. Davis.

SATURDAY.

Rush Medical College—2 p. m., Surgical, Prof. Gunn.
Chicago Medical College—2 p. m., Surgical, by Profs. Andrews and Isham; 3 p. m., Diseases of the Chest, by Prof. Johnson.
Special Clinics daily, from 2 to 4 p. m., at the South Side Dispensary, and at the Central Free Dispensary.

THE

Chicago Medical Journal

AND

EXAMINER.

VOL. XXXVII.—SEPTEMBER, 1878.—NO. 3.

To our Readers and Correspondents.

Beginning with Vol. XXXVII., July, 1878, the CHICAGO MEDICAL JOURNAL AND EXAMINER prints all records of length and weight in terms of the Metric System, and all records of temperature in degrees of the Centigrade Scale. The Metric System, legalized in the United States and Great Britain, is extensively or exclusively employed by other civilized nations, and has thus become an essential part of the international language of science. It is recommended for adoption to the profession in this country by the American Medical Association and other scientific bodies. To-day no physician can afford to be ignorant of its value, its simplicity and the meaning of its terms.

The subjoined tables and scales, which have been kindly prepared for us by Prof. W. S. Haines, will be continuously reproduced in subsequent numbers of this journal, for the ready reference of our readers and correspondents.

Metric Measures of Length.

Millimeter	0.001	of a	Meter	0.03937 inches.
Centimeter	0.01	"	"	0.39370 "
Decimeter	0.1	"	"	3.93707 "
Meter	**1.**	**Meter**		**39.37079** "
Decameter	10.	Meters		393.70790 "
Hectometer	100.	"		3937.07900 "
Kilometer	1000.	"		39370.79000 "

Metrical Weights.

Milligram	0.001	of a	Gram	0.015 grains.
Centigram	0.01	"	"	0.154 "
Decigram	0.1	"	"	1.543 "
Gram	**1.**	**Gram**		**15.432** "
Decagram	10.	Grams		154.323 "
Hectogram	100.	"		1543.234 "
Kilogram	1000.	"		15434.348 "

☞ The United States "nickel" five cent piece weighs five grams, and is two centimeters in diameter.

Approximate Equivalent of Metrical Weights.

For Rapid Reference.

Milligrams.	*Grains.*	*Decigrams.*	*Grains.*
1 (written 0.001 or |001)*	1/65	1 (written 0.1 or |1)	1 1/2
2	1/32	2	3
3	1/22	3	4 1/2
4	1/16	4	6
5	1/13	5	7 1/2
6	1/11	6	9
7	1/9	7	11
8	1/8	8	12 1/2
9	1/7	9	14

Centigrams.	*Grains.*	*Grams.*	*Grains.*
1 (written 0.01 or |01)	1/6	1 (written 1. or 1|)	15
2	1/3	2	30
3	6/13	3	46
4	7/11	4	61
5	3/4	5	77
6	9/10	6	92
7	1	7	108
8	1 1/4	8	123
9	1 1/3	9	139

A Kilogram—2 1/6 lbs. Avoirdupois.

* The decimal *line* instead of points makes errors impossible.

Metric Fluid Measures.

When using the metric system, fluids are preferably prescribed by weight, employing the gram, its multiples and subdivisions, just the same as with solids, thus avoiding the errors due to refraction, adhesion, and inaccurate measuring vessels. For practical purposes four grams of water may be regarded as equivalent to a fluid drachm of that liquid, and the same may be considered true of tinctures and infusions; syrups, on the average, are about one-third heavier than water, so that a fluid ounce of a syrup will be approximately represented by 43 grams.

If preferred, however, fluids may be prescribed by volume, in the metric, just as in the present system, using for that purpose the *Cubic Centimeter*, that is, a volume represented by a cube all of whose sides measure one centimeter. An ordinary back-gammon die is usually about this size. One cubic centimeter (written 1 C. C.) — 16.231 minims. It is approximately regarded as one fourth of a fluid drachm.

Approximate Equivalents of Cubic Centimeter.

0.001	C. C.	—	$^1/_{65}$ minim.
0.01	"	—	$^1/_4$ "
0.1	"	—	$1^1/_2$ "
1.	C. C.	—	15 minim.
4.	"	—	1 fluid drachm.
16.	"	—	4 fluid drachms.
32.	"	—	1 ounce.

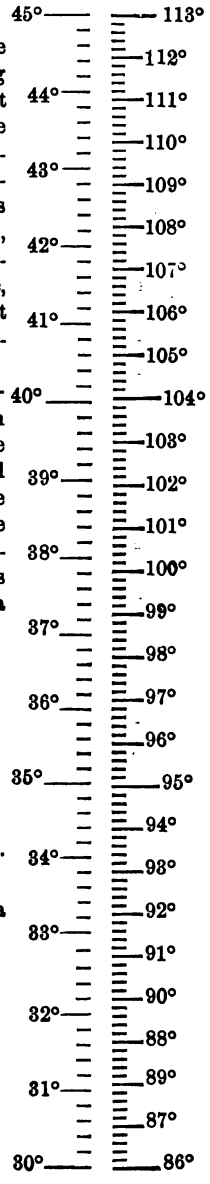
1000 C. C. (usually known as a **Liter**) is a trifle more than one quart, wine measure.

The following prescription—

R: Potassii bromidi, ʒi.
Elixir aurantii, fl., ʒviij.
M.

Would, in metric terms, be written:

Potassic bromide, 32 |
Orange elixir, 250 |
Mix.



Original Communications.

A CONSPECTUS OF THE DIFFERENT FORMS OF CONSUMPTION, INTENDED AS AN AID TO DIFFERENTIAL DIAGNOSIS.

By Roswell Park, A. M., M. D.,

Demonstrator of Anatomy, Woman's Medical College; Surgeon to the South Side Dispensary.

(Based upon the labors of Niemeyer, Wagner, Rindfleisch, Ruehle and Virchow.)

The writer assumes that no apology is needed for any article calculated to throw any light upon the early recognition or differential diagnosis of the different forms of that dread malady—consumption. In the following contribution his sole endeavor has been to be *practical.* It would be impossible to present a complete picture of the disease within the limits allowed; much that is omitted must, therefore, be excused on that ground. The determination as to whether a case of phthisis before us is in a tuberculous condition; even further than this—to diagnose exactly the condition it may be in, is, as every one will recognize, of vast importance, especially as bearing on our prognosis and treatment.* That many advances have of late been made in this direction, we have reason to congratulate ourselves. Altogether too much carelessness exists in confounding the words "consumption" and "tuberculosis," "consolidation" and "deposit of tubercle," their indiscriminate use betraying some uncertainty in the minds of those who thus employ them.

So-called consumption, when advanced, can usually be diag-

* For an excellent summary of the benefits of change of climate in the different forms of phthisis, with advice as to choice of localities, see the address of Prof. Loomis before Section I. of the American Medical Association during its recent meeting at Buffalo; reported in the July number of this journal.

nosed by the merest tyro, but to recognize it in its formative stage, to differentiate it from other pulmonary complaints, to discern the tubercular element, are often matters requiring most careful scrutiny.

That patients live and die with phthisis without the formation of a particle of tubercle is an established fact; that others develop tubercle in the course of the complaint, and that in yet others the tuberculous process is the initiative step, are equally true.

Any assistance, therefore, to the separation and identification of each class of cases, is of practical importance. As a contribution in this direction, the writer submits the subjoined tabular views, hoping that they may prove as useful to others as they have been to himself.

But there are many points in the general appearance of a patient with incipient phthisis which may be regarded as aiding in the diagnosis or showing a condition of system favorable to its development. At the risk of being prolix, the writer desires to mention the following: slender bones, thin skin, delicate hue of cheeks, large eyes, bluish sclerotic, long eyelids, pale face which blushes readily, little subcutaneous fat, thin, slender hands with incurvated nails (the clubbed fingers are not distinctive of phthisis as many suppose; they are noticed in several chronic complaints), sharply defined red line at the edge of the gums opposite the canines and incisors; poorly-shaped muscles—especially those of the neck which allow the thorax to sink and thus cause the neck to appear long, small antero-posterior diameter of thorax, wide interspaces, acute angle of junction of ribs to sternum—causing the chest to seem long, flat and narrow, shoulders tipped forward and inner angles of scapulæ tipped up like wings; abdominal character of respiration, spots of pityriasis (tinea) versicolor or lentigo hepatica on back and chest; rise of temperature (38.5 C.) with flushed cheeks and hot hands *at evening*, gradual emaciation, wandering pains in chest and shoulders, etc.

Among the physical signs may be mentioned—special excitability of the heart in anæmic persons, continuous acceleration of the pulse without evidence (except by the thermometer) of increased temperature, systolic murmur in the subclavian, becoming louder

or heard only during expiration (a sign of adhesion of pleural surfaces at apices). The pulse is not only rapid, but soft and empty, and even when there is fever it has not the usual sthenic characteristics. Enlargement of glands may cause venous compression with dilatation of veins of neck and face, or even cyanosis. Depression of supra and infra-clavicular spaces does not always *of itself* indicate any variety of phthisis; it is due to induration or shrinking of the apex of the lung (from pneumonic-cirrhotic—processes) and may predispose. But when it appears by itself without other signs to indicate phthisis, it more often indicates a partial cure of the nutritive changes which of themselves predispose to that disease. A feebleness of respiration in the same locality and with similar accompaniments is of similar import. So also is a wide extension of cardiac shock and dislocation outward of apex beat. These latter signs, therefore, are by no means pathognomonic of phthisis unless accompanied by other signs, as above.

Caution is required if one would not be misled by too great reliance on physical signs. Puerile respiration and increased vocal resonance in right infra-clavicular and supra-spinous regions, often alluded to as signs of incipient phthisis, are met with in healthy lungs, and should not be regarded as suspicious sounds unless accompanied as above. So, too, with regard to fever; a fever which has no obvious cause, and which persists, points to phthisis; if there be absence of fever and suspicious physical signs, even though there be emaciation and cough (often caused by tracheal catarrh or chronic tonsilitis), the fear of phthisis may be dismissed.

Anæmia, combined with dyspepsia and hysteria, may simulate phthisis; here the thermometer should decide. Chronic bronchial catarrh may cause needless alarm; but this need not be unless it shall have attacked the apices; its usual manifestations are confined to the lower lobes, and as improvement occurs it takes place from above downward.

Phthisis may be strongly suspected when a patient with a cough has or has had an uncontrollable diarrhœa, or non-specific aphonia or when fever is present without other cause.

Without going at all deeply into the consideration of the æti-

ology of consumption, certain factors in which are mentioned in the tabular statements, a few either of the more prominent points, or of those too often overlooked, will bear mention in this connection; consideration of these points not infrequently influencing our diagnosis.

A sudden chilling of the stomach or of the skin may be sufficient to set up catarrhal or pneumonic processes whose termination we cannot forsee. Children fed on pap instead of being nourished at the breast, are more apt to react poorly against such disease. Diseases such as syphilis, typhoid, diabetes, chlorosis, etc, predispose, inasmuch as they cause malassimilation. Puny, badly nourished subjects, are more susceptible, because among such, inflammatory nutritive disorders show greater tendency to cell formation and subsequent caseous degeneration. Great alterations of temperature and a high degree of moisture each predispose, as do previous and frequent catarrhs.

Lack of expansibility of chest apices owing to change in the cartilages of the first ribs, congenital or occurring in early youth (e. g. ossification or shortening), faulty carriage of body, diminished respiratory capacity, due to feebleness of respiratory muscles, are all prominent factors. Bronchial catarrh and usually associated disease of the bronchial glands attending measles, especially when epidemic, and the frequent general glandular troubles also attending it, make it a frequent cause. The connection between phthisis and pertussis is, for the same reason, equally manifest. That between phthisis and the later stage of diabetes mellitus is more obscure.

Hæmorrhage, as such, does not predispose except as its resulting clots fail to be resolved and absorbed; clots or fragments of clots remaining may be regarded with considerable concern.

There is no evidence that the milk of consumptives can excite the disease.

On the other hand, malaria and valvular heart disease are said to confer some immunity. While the phthisical lung is the more vascular, emphysematous lungs are more dry and bloodless and rarely inflame; but when once inflamed they degenerate rapidly.

With regard to the cough, almost always a distressing feature, it may be regarded as the expression of (*a.*) the extent of impli-

cation of the bronchial mucous membrane; (*b.*) the extent of implication of the lymphatic (bronchial) glands; (*c.*) nervous reflex excitability; (*d.*) the proximity of the lesion to the larynx.

Table I. gives, side by side, the features of the three different forms of inflammatory phthisis uncomplicated by tubercle; the site of the primary lesions being respectively in the *interstitial connective tissue*, the *acini* or *alveoli* and the *bronchioles*. The second class of cases can usually be more easily differentiated from the first than from the third; while in many cases there are such a variety of pathological processes taking place consentaneously that it may be impossible to assign the patient a place in any one class.

But that cases are frequently met with where this classification can be made, I trust no one will deny. It is taken for granted that the tubercular element has been excluded (though perhaps this is not essential); this is done chiefly by aid of the thermometer (vide Table II.) This table is founded principally upon the monograph of Ruehle. (Ziemssen's Cyclop).

Table I.

Uncomplicated Inflammatory Phthisis.

Simple Chronic Apicial Pneumonia.	Lobular Disease Characterized by Foci:—Broncho Pneumonia.	Apicial Catarrh.
Changes consist of simple, chronic, indurative inflammation.	Changes consist of formation of clusters of nodular foci which excite inflammation in surrounding parts and coalesce with the inflammatory products thus formed. The whole mass then becomes caseous, and breaking down forms ulcers, and so the destructive processes advance; or they may be arrested by the recurrence of simple inflammation with resulting induration.	Beginning in the bronchi, producing inflammatory infiltration and swelling of the entire thickness of their walls, with caseation and dilatation. Degeneration then takes place, pneumonic processes are set up by extension into the parenchyma, and the inflammatory products either necrose or undergo induration resulting in limitation and cure.
The most important physical sign is dullness in the supra, and infra-clavicular and supra, and infra-spinous fossæ. The more intense and extended this dullness, the greater the probability that this is the form of the disease.	Slight dulness, with sunken supra-clavicular fossæ; apices of lungs lowered. (Best ascertained by percussion in front, with patient's mouth open.)	First shades of dulness develop very gradually in apices, and sometimes a little further down.
Later the altered shape of affected side and impeded respiration show that shrinking has supervened. This sinking above and below the clavicle and the flattening of the whole upper part of the thorax indicate chronic pneumonia.	Narrowed chest, with imperfect and unequal expansion.	
	Signs of infiltration predominate over those of bronchitis.	Signs of bronchitis predominate over those of infiltration.

Respiratory murmur changes gradually from a puerile respiration to a loud, harsh, bronchial sound, heard both during inspiration and expiration.	Expiratory sound is usually bronchial; and in many cases the inspiratory sound has an uninterrupted, vesicular character for an appreciable time before the sound becomes bronchial.	
Crepitant râles may be heard at times; if present, they are rather sibilant in character. If any catarrh be present, these may be abundant.	Crackling râles are scanty at the outset; but when softening takes place, they are abundant, and mixed with a sibilant, bubbling sound.	Non-sibilant crackling râles are heard from the outset, at least on deep inspiration and coughing. Later the râles may become sibilant.
The local signs extend very slowly, or as gradually become confined and fixed.	Course more rapid.	Same.
If bronchiectases are produced by the cirrhosis and retraction of the connective tissue, signs of cavities of corresponding size will be found.	As the disease advances (*vid. supra*) auscultatory and other signs of cavities are discerned; *e. g.*, tympanitic and "cracked-pot" resonance.	Same.
Cough is usually of moderate severity, or may be absent.	Dry cough from the outset, with scanty expectoration.	Cough, with moderate expectoration, one of the first symptoms.
Expectoration scanty; but in case there be inter-current bronchial catarrh, it is more abundant, catarrhal in character and muco-purulent.	When expectoration is a feature, the sputa are gelatinous, of reddish tint, and contain elastic fibers early in the disease.	Expectoration accompanies the cough; sputa frequently contain streaks of blood.
Sputa contain no blood.	Later the sputa are more solid and globular, and contain more or less blood.	Sputa contain also yellowish-white, non-aerated streaks, and much amorphous matter, together with small detached particles which sink in water.
Hæmoptysis rarely or never.	Hæmoptysis may cause the first alarm.	Hæmoptysis not as likely to occur.
Pains—supposed often to be rheumatic—frequently occur on affected side.	More or less pain.	More or less pain.

Usually no complications.	Derangement of appetite and digestion frequent. Functions of larynx and intestines rarely undisturbed.	Laryngeal and intestinal complications make their appearance late.
Fever—at evening—absent or inconsiderable.	Fever — at evening — is present, with night sweats.	Fever inconsiderable until the disease is advanced.
Emaciation — at first only slight — increases very slowly or disappears.	Emaciation one of the earliest and most prominent symptoms; advances *pari passu* with the fever and complication.	Emaciation and loss of strength, with constitutional symptoms, are among the first suspicious signs noticed.
Heredity plays an unimportant part.	Heredity plays an important part, as do rapid growth, poor development, and such diseases as typhoid, morbilli, pertussis, etc.	Heredity plays a conspicuous part, especially in "scrofulous" patients, or those who have frequent attacks of catarrh.
Local irritating causes are a much more important factor.	Local irritating causes are a much less important factor.	Same.

Thus much for the cases of purely inflammatory phthisis. The frequent complication of such cases by the neoplastic element, *tubercle*, makes possible yet another grouping between, on the one hand, those cases included in Table I, and, on the other, certain cases where the appearance of miliary tubercle is, so far as can be determined, the first pulmonary lesion. Between these two strongly contrasted forms occurs one where tubercle is found in products of previous inflammatory change.

Our knowledge of tubercle is yet far from exact, and the dividing line between it and scrofulous and other affections not clearly drawn. But the writer may be allowed to define the position taken in preparing this paper. With regard to scrofula, Ruehle's views seem so just and well-founded, that they are given almost verbatim.

By scrofula is meant—not any particular feebleness or sickliness of body, but rather a tendency to certain forms of disease, e. g., inflammations of mucous membranes and skin, whose products are abnormal in character, and which being carried to the lymphatics excite in them inflammation or hyperplasia. These inflammations are characterized by abundant cell proliferation. According to Rindfleisch, one fundamental characteristic of scrofulous affections is the accompanying disproportion between the volume of the blood and the weight of the body.

Scrofulous, as well as other inflammations lead often to the formation of cheesy masses. Tnese are described by Wagner as being results of inflammation where the purulent or fibrino-purulent exudation, or the desquammated epithelium have, in consequence of anæmia, lost so much liquid that there results a dry, grayish or yellowish mass, firmly imbedded in the tissues. Even tubercle itself, as well as old cancerous nodules, hæmorrhagic infarctions, incapsulated collections of pus, etc., may undergo this change as well as fatty metamorphosis. There is no *yellow tubercle* as formerly spoken of; when such is found, it is the product of the cheesy atrophy just mentioned.

Now these cheesy infiltrations and suppurations of mucous membranes, by some unknown means, elaborate a poison which, when re-absorbed, produces tubercle. The source of tubercular infection is, therefore, thus furnished by the patient himself. (Rindfleisch.)

Probably the best idea or definition of tubercle may be gathered from the description of Wagner, who considers it an infiltrated, multiple, usually miliary, non-vascular neo-plasm, consisting especially of nuclei of varying sizes, indifferent and giant cells—all imbedded in a reticular tissue, and which constantly tends to pass into cheesy atrophy or softening. The basis for its development—the cheesy focus—is most frequent in connective tissue, previously irritated ("scrofulous") glands, bones, testicles, etc. This cheesy focus may be incompletely encapsuled, the capsule being only a relative and considerable but not absolute obstacle to resorption. Tubercle probably originates from (fixed) connective tissue corpuscles, and the endothelium connected therewith; it grows by division of the nuclei and extends along connective tissue, lymphatics and blood-vessels.

Tuberculosis has its analogies to miliary carcinosis; is probably transmissible, like glanders, syphilis, etc., and is not usually found with other infectious diseases.

With regard to the prognosis of cases of consumption thus complicated, resorption of tubercle, accompanied usually by fatty atrophy, takes place very rarely indeed; calcification, softening and liquefaction (ulceration), much more frequently. But there is never a chance that the lung can return to its normal condition. The best that can be hoped for is that the lesions already existing may be rendered innocuous; this happens by shrinkage of the infiltration and formation of blood-vessels which do not penetrate deeply, but supply constant though scanty nourishment. (Rindfleisch, Wagner.) Of course this applies only to cases referred to in the second column of Table II.

These remarks will suffice to explain more fully the following table. If there be any one point in it upon which sufficient stress has not been laid, it is that in reference to the constant use of the thermometer as an aid to diagnosis. The writer deems it possible by its aid, and by the other signs given in the same table, to group four-fifths, at least, of cases of consumption in their proper place; and of those coming under the heading of the first column probably one half can, by the use of Table I, be again classified.

TABLE II.

Non-Tubercular Compared with Tubercular Phthisis.

INFLAMMATORY.	TUBERCULAR.	ACUTE MILIARY TUBERCULOSIS.
Purely and Directly the Result of Inflammatory processes. May be either one or a complication of all the forms mentioned in Table I.	*Adventitious Deposit of Tubercle (Miliary) following Caseous Metamorphosis of Products of Inflammation.* Always secondary to the inflammatory variety.	*Supervention or Formation of Miliary Tubercle during Apparent Good Health.* Much resembles an acute infectious disease.
ÆTIOLOGY, ETC.	ÆTIOLOGY, ETC.	ÆTIOLOGY, ETC.
Exciting causes: anything which produces congestion and bronchial catarrh. (*Vid. supra.*)	A sort of middle ground between the forms on either side. Occurs in connection with pre-existing lesions of the apices. The greatest danger for consumptives is that they may become tuberculous. Incapsulation of caseous masses affords some protection against this.	But one cause is known; the absorption of caseous matter. Most cases present some antecedent lesion of some organ; but often not recognized. Persons predisposed to inflammatory action suffer from acute and primary tuberculosis with greater relative frequency.
Pneumonia, catarrhal or croupous, when it has attacked the apex.	Next after the caseous products of pneumonia in liability to tubercular infection come the exudates of pleurisy and pericarditis; caseous, lymphatic and bronchial glands, etc.	Where measles, etc., or "scrofulous" affections have caused enlarged lymphatics, bronchial glands, etc., or where there are caries of bone, caseous testicle, prostate or bladder, remains of inspissated abscesses, remains of serous inflammations or ulcerations, or the like, there may be said to be cause for development of miliary tubercle. When it assumes the form of an
Croup, cerebral irritation, or moist eruptions, may be followed, after puberty, by bronchial hæmorrhage and inflammatory lung disorder.		

Pertussis, morbilli, scarlatina, etc., may lead to this form directly.	Pertussis, morbilli, scarlatina, etc., may lead to this form by producing a "scrofulous" condition and glandular tuberculosis, thus supplying foci for subsequent general infection.	acute disease, these foci may be considered as having for some time remained non-infective. Same.
PATHOLOGY.	PATHOLOGY.	PATHOLOGY.
Is the result of inflammatory processes, and is a chronic disease with intercurrent simple forms of inflammation, which may heal by cicatrization.	Is the result of a neoplasm; is more or less chronic, and is a resorption disease.	Is the result of a neoplasm; is rapidly acute, and is a resorption disease.
Consists in suppuration or caseous degeneration of lobular or lobar infiltration; the extension (with exceptions) of a chronic catarrh and copious secretion of young cells into the bronchioles and finally into the air vessicles.	Follows caseous infiltration or degeneration as a sequel to chronic catarrhal or croupous inflammation, tubercles being deposited in the metamorphosed pneumonic product.	The focus of attraction for the acute production of tubercle in the lungs is usually a pre-existing chronic tuberculosis of those organs; when miliary tubercle forms the only lesion we have to do with the acute infectious disease.
	Is regarded by some as a combination of inflammation and tuberculosis.	There is no chronic miliary tuberculosis in the *old* sense of the word.
	Plays a subordinate rôle, inasmuch as tubercle is an accidental, secondary product.	
	The number, size and distribution of of miliary tubercles do not necessarily	Same.

	afford an expression of the constitutional disturbance.	
	When upon phthsis tubercle supervenes, it usually first develops in the mucous membrane of the bronchi, trachea or larynx. The most frequent site is the point where the bronchiole connects with the acinus. Thence it spreads in all directions.	In the invasion of miliary tuberculosis three stages are often distinguishable: (*a.*) Local scrofulo-tubercular primary infection; (*b.*) tuberculosis of lymphatic glands; (*c.*) general infection.
When the branches of the pulmonary artery become obliterated, the bronchial arteries enlarge and conduct the supply of blood to the lungs. The intercostal arteries also enlarge and advance through the pleuritic exudate; so that the affected lung really receives more blood than the sound one. Part of this blood is discharged into the intercostal veins; this impedes the discharge of the cutaneous veins into the intercostal so that the former enlarge; and hence the blue network of veins often noticed on the chest wall.	Same.	Time is not afforded for these changes.
Cavities are enlarged by the same processes which assisted in their formation.	Cavities rarely enlarge by caseous degeneration of the tubercular infiltration, but by a diphtheritic infiltration with subsequent decay.	Cavities are not formed.
Often accompanied by laryngeal and intestinal diseases, as well as by fatty or amy-	Often combined with laryngeal disease, ulcer of the bowel, intestinal or cerebral	May be complicated by intestinal as well as cerebral or meningeal tubercle.

loid changes in the liver; with the access of the former (fatty change) occurs imperfect assimilation of food and emaciation; with the access of the latter the pulmonary symptoms often seem to recede.	tubercle, and fatty or amyloid liver and kidneys.	
In protracted cases the volume of the blood is diminshed and the heart flabby. In recent cases the flow of the right heart is impeded, and it is therefore dilated and hypertrophied.	Same.	Cases cannot be considered protracted; nevertheless the same change may occur.
Never appears before first dentition.	Same.	May occur in early infancy.
MORBID ANATOMY.	MORBID ANATOMY.	MORBID ANATOMY.
The anatomical appearances are so varied and inconstant, and so familiar, that space cannot be afforded to describe them. Suffice it to say, that among all the appearances of infiltration, dilatation, caseation, ulceration and necrosis, *no* tubercles are found.	The tubercle of chronic tuberculosis is never uniformly disseminated; the gray tubercle proper being found along with the yellow caseous masses (the so-called "yellow tubercle") showing the deposit to have gradually taken place. The abdominal viscera are less often covered with tubercles.	Lungs are congested, œdematous, emphysematous at edges, and present in the vast majority of cases an uniformly studded aspect of miliary tubercles, gray, translucent and fresh. Pleuræ the same. The peritoneum, liver, kidneys and spleen are usually covered with the same. Also, in young subjects, the parts about the base of the brain. The smallest miliary tubercles, being invisible to the unaided eye, are often overlooked in the glands and viscera.
After death the skin is remarkably white and covered with scales of pityriasis (tinea) tabescentium. Feet and limbs are often	Same.	The corpse usually resembles that of one dead from acute febrile disease, decomposing rapidly. The blood is dark and liquid and settles to dependent parts, causing pul-

œdematous, and crural veins plugged with thrombi.		monary hypostases and suggillations The muscles are friable. The spleen soft and enlarged.
A catarrhal ulcer of the intestine should not be mistaken for tubercular.	Many so-called tuberculous ulcers of the intestines are of a lardaceous or catarrhal character.	Intestinal ulcers very rarely form.
	The center of the tubercle usually degenerates first.	Same.
Caseous bronchial glands infrequent.	Caseous bronchial glands frequent.	Same.
		As there has been more or less bronchial or tracheal catarrh during life, evidences thereof are found after death.
SYMPTOMATOLOGY AND SEMEIOLOGY.	SYMPTOMATOLOGY AND SEMEIOLOGY.	SYMPTOMATOLOGY AND SEMEIOLOGY.
Has a period of percussory catarrh, with protracted cough and expectoration, of variable duration; this need not necessarily commence in the alveoli and bronchioles, or connective tissue, but may proceed downward from the trachea.	Is necessarily preceded by some such condition as that just described.	At outset repeated rigors, without complete intermission, with rapid pulse increasing respiratory rate, and severe constitutional disturbance.
Fever and wasting deferred.	Pallor, fever, emaciation and night-sweats usually appear early with cough and expectoration.	Very much resembles typhus.
		Anorexia a notable symptom; mouth often dry, at times very moist.
		Rapidly increasing prostration with aggravated cough and dyspnœa.
		Extremities cool. Slight cyanosis.
		Soon colliquative sweats, pulse more

Physical signs are enough to explain other symptoms. Well defined, dark yellow streaks in sputa, showing that the catarrh has reached the finer bronchi; a bad sign. Infiltration and caseous degeneration may occur without cough or expectoration. Should intestinal inflammation complicate such cases it may exercise a derivative influence on the bronchi. Voice and cough rarely hoarse.	Spleen may be slightly enlarged. Same. A hoarse or inaudible cough or a distressing laryngitis may occur with the advent of tubercular complication, and are pathognomonic and unfavorable signs.	rapid, emaciation from day to day, sensorium deranged and semi-coma. Spleen is usually enlarged. Are not enough. Condition of sputa crude and dependent upon the amount and extent of bronchial catarrh; they possess no characteristic appearances. Cough may be distressing, but hoarseness is rare.
The discovery of elastic fibres in the sputa is a positive sign.	The same holds good here; and when the sputa of a persistent cough, accompanied by fever, for a long time retain the crude character of the mucous sputa of acute bronchitis, suspect development of tubercle, since the existence of tubercle in bronchial mucous membrane is generally attended with distressing cough and scanty sputa.	The cough of this variety may be thus accounted for.

The appearance of blood *in* muco-purulent sputa, whereby they acquire a yellowish-red color, indicates a chronic pneumonia, and shows that catarrh has extended to the air vesicles.		
Rounded, nummulated sputa, which sink slowly to the bottom, and do not coalesce, are sure indications of a *cavity*, but not necessarily of tuberculosis.		
The hectic is more of a *remittent* or *intermittent* than of a continued type; with a range of, say, 1.1° C. between evening and morning temperature; the evening elevation being a constant feature.	The hectic is of a *continued* type: temperature always above normal, but not much higher in the evening than in the morning; *i. e.*, the remissions *not* well marked; moreover it resists treatment.	Temperature is of the *remittent* type; but not infrequently the maximum occurs during the morning. It rarely rises very high at any time, and towards the end the mean temperature may decline.
The fever may present all possible variations in the same individual. A sudden accession may be regarded as an indication of some fresh inflammatory process; *e. g.*, pleuritis, pneumonia.		Pulse becomes smaller, and yet more rapid, while the respiration rate increases; œdema of lungs from insufficient filling of right heart, and finally palsy of bronchi and suffocative effusion; the violence of the fever, malignancy of the disease, dyspnœa and rapid collapse, affording data for differential diagnosis.
(In children the invasion of the air vesicles by an acute catarrh is accompanied by increased temperature and accelerated pulse.)		
With marked evening rise of temperature, the rate of respiration does not correspondingly accelerate; hardly ever more than six or eight breaths per minute.	Same with regard to period of maximum temperature; only the temperature range does not show such sharp curves.	Temperature very seldom reaches 40° C., and is out of all proportion to the rapidity of the pulse.
Patients may run through the whole	Diarrhœa, especially in those of costive	Little or no meteorism or ileo-cæca

course without diarrhœa or evidences of meningeal complication.	habit; signs of implication of meninges, especially in younger subjects; also hoarseness and aphonia.	tenderness. Stools are indefinite in color and consistence.
Profuse sweating, usually at night.	Same; with sudamina.	Profuse sweating at no particular time; sudamina frequently.
Pain in shoulders and chest more frequent.	Pain in shoulders and chest less frequent.	Little or no pain in shoulders or chest.
A white coat of vegetable spores and filaments often found on tongue.	Same.	
Painful decubitus in last stage; with œdema of feet.	Same.	Patient usually succumbs in from two to six weeks.
May terminate with hæmorrhage.	Same.	The disease may be complicated with tubercular meningeal trouble, and then be even more rapidly fatal.
PHYSICAL SIGNS.	PHYSICAL SIGNS.	PHYSICAL SIGNS.
With patient's mouth open it is not difficult to mark out, in front, the upper limits of the lungs—an important matter. (*Vid.* Table I).	A feeble respiratory murmur where the percussion note is normal or abnormally resonant is indicative either of tubercular trouble or lobular pneumonia.	Any previous dullness or history of pulmonary disorder is of great significance.
Rapid respiration and even dyspnœa *with* dullness.	Rapid respiration and even dyspnœa *without* dullness.	Same. Respirations may run up to 50 or 60 in the minute, but without correspondingly increased exertion characteristic of true dyspnœa.
Physical examination usually reveals enough to account for other symptoms.	Physical examination usually fails to reveal enough to account for *all* the symptoms.	Same.
Solidification of lung usually extensive.	Even after consecutive pneumonia, with bronchial breathing and ringing râles, solidification *not* extensive.	No solidification or infiltration.

When area of dullness accords with the other signs it is a comparatively favorable feature.

The presence of lobular infiltration may, in some cases, cause a hollow or tympanitic note.

'Cracked-pot' resonance over a cavity with thin walls.

Fremitus is intensified over cavities connecting with bronchi and containing air. (Of little value as a sign.)

Bronchial respiration, broncophony, and sonorous râles are heard after extensive induration.

In the first stage, feeble, harsh or puerile respiratory sounds are heard, with all the signs of catarrh at apices. (*Vid.* Table I.)

Tubercle *of itself* never gives rise to sufficient consolidation to cause dullness.

The presence of miliary tubercle may, in exceptional cases, produce the same percussion sound.

Same.

Same; fremitus may also be exaggerated by lobular infiltration and by tuberculosis.

Same.

Seldom any perceptible abnormality of percussion note, or but very slight change, as compared with the other side.

Vid. supra.

Sometimes a soft friction murmur, caused by tubercular deposit on pleural surfaces, is heard. (Juergensen.)

The different signs of catarrh, accentuated inspiration with audible expiration, whistling, sonorous bronchi over whole lung; and later râles, heard first in dependent regions.

125 STATE ST., Chicago.

MIGRATION OF LEUCOCYTES IN PASSIVE HYPERÆMIA.

By Wm. T. Belfield, M. D.

Read at the National Microscopical Congress, August 15th.

In March last I had occasion to superintend the *post mortem* examination of a case of pneumonia in which death had occurred on the tenth day of the disease. There was found consolidation of the entire left lung—gray hepatization in the lower lobe, red in the upper. Nothing peculiar was noticed in the other organs except general engorgement, especially marked in the kidneys. There had been, during our observation of the patient, not a solitary symptom of renal disease except the presence of albumen (about five per cent.) in the urine—a presence known to be common in pneumonia and attributed to mechanical congestion; for at least three features of pneumonia tend to the production of mechanical congestion: the decrease in breathing surface, the increase in the demand for oxygen made by the excessive tissue change, and the feebleness of the heart's contractions. Hence the albuminuria and the *post mortem* engorgement of the kidneys were regarded as legitimate results of the disease. A happy curiosity, however, led me to make a microscopic section of the kidney. I found the tubules rather smaller than usual, the intertubular spaces and capsules of the malpighian tufts much thickened by the presence within them of numerous small, round, finely granular cells $\frac{1}{2400}$ to $\frac{1}{3000}$ inch in diameter. These cells had every appearance of white blood corpuscles and were so considered by Dr. Danforth and others. By way of explanation it was presumed that the retardation of the blood-current due to the causes previously mentioned, had afforded the colorless corpuscles an opportunity to exhibit their amœboid movements, and that the opportunity had been improved. That this was not an inflammatory process was proved by the absence from the clinical history of all the recognized symptoms of renal inflammation, and by the absence from the urine of the exudation cylinders or tube-casts.

Nor were the microscopic appearances of the organ those of inflammation.

Within six weeks I had an opportunity of examining the kidneys of two other patients dead from pneumonia without previous history of renal disease. In each case the urine contained a small quantity of albumen but no casts, and in each instance colorless corpuscles were found in abundance in the intertubular tissue and in the malpighian capsules. At a meeting of the West Chicago Medical Society, held June 10th, I exhibited a section from one of these kidneys and another from a normal kidney, demonstrating to the satisfaction of those present the existence, within the connective tissue of the former organ, of the small round cells above described. At that time I had sought unsuccessfully for literature or a reference to literature on this subject. However, deeming the fact, if it were a fact, of the migration of leucocytes in passive hyperæmia a very important one pathologically, I determined to investigate the case, and for that purpose instituted the proceedings about to be narrated.

On June 19th I curarized a frog, cut down on the femoral vein, made compression by means of a rubber band and a piece of cork (which was readily done without compressing the artery, as in the frog the vein and artery lie on opposite sides of the femur) and stretched the web of the corresponding foot on the stage of the microscope. I employed a Hartnack No. 4 objective, and a Gundlach C. periscopic eye-piece. By watching the blood movements I easily regulated the pressure so as to retard more or less completely the onward movement, avoiding complete stagnation. After considerable pressure had been exerted, as was shown by accumulation of blood corpuscles, distension of the veins, and retardation of the current, the field was carefully watched for nine hours. During this time no leucocytes were actually observed to leave the vessels, yet several were seen just external to the walls, having apparently escaped unnoticed during the shifting of the stage. For the next ten hours the field was not observed with sufficient care and frequency to warrant any assertion of migration. At the end of this period, however, that is nineteen hours after compression was made, an almost continuous observation of the field was begun. From the 19th to the 36th hour

leucocytes were observed to leave the vessel in considerable numbers, the shortest time of exit observed being twenty minutes—the average, one to two hours. The method of locomotion did not of course, differ from that exhibited in inflammation, though at no time did I observe the excessive change of form and protrusion of long processes figured in the books. There was frequently a flattening of the leucocyte against the wall; then the appearance of a bud external to the wall; then the gradual enlargement of this bud and shrinkage of the intra-vascular portion, the part piercing the wall being apparently a tunnel through which the rest of the body passed. Often the locomotion was continued after the leucocyte had become wholly extra-vascular, so that it traveled several times its own diameter from the place of exit. It was noticed, too, that other corpuscles were prone to pass out at the particular point of previous emigration, so that sometimes several would be crowded together along the vascular wall, and an hour later would be in close proximity external to the vessel opposite the same point. This phenomenon occurred usually not in the minutest capillaries, but rather in the large capillaries and small veins, ranging from $\frac{1}{1500}$ to $\frac{1}{600}$ inch in diameter. Nor were the passages always made where the current was slowest, nor where the vessel gave evidence of greatest engorgement, as emigration from a relatively rapid current, but sparsely supplied with corpuscles, was not infrequent.

Before I had watched the process a great while, I became aware that the colorless corpuscles were not the only bodies exhibiting amœboid movements. I observed that certain red ones, without nuclei, of circular shape and small size ($\frac{1}{2500}$ inch in diameter), performed the same movements with as great celerity as did the white. (The reader is reminded that in the frog the perfect red corpuscle is of elliptical shape is $\frac{1}{1200}$ inch in its longer diameter, and has a distinct nucleus; while the white globule is, when at rest, of circular shape, its diameter being only about $\frac{1}{2500}$ inch.) There could be no possibility of confounding these small red ones with the white; for although in size, shape and movements they were identical the red color of some was unmistakeable. So extensive was the locomotion of the red ones that at the 36th hour of the experiment there were numerous red patches in the

field, which looked almost like hæmorrhages. That they were not hæmorrhages I knew, first because there were no large oval corpuscles, the red globules proper, but only the small circular ones; second, because they were fixed in the tissue, not floating to and fro in blood serum; third, because I had seen many of them pass slowly through the vascular walls.

These phenomena were witnessed not by myself alone. Dr. Bridge observed the emigration of several corpuscles; Dr. Danforth while unable to watch the process for a considerable time, was convinced that emigration actually occurred; Miss Meigler observed numerous red as well as white cells leave the vessels.

Having established the fact of the locomotion, therefore, it remains to prove the dependence of that locomotion upon mechanical congestion rather than upon active hyperæmia. That congestion existed was shown not only by the retardation of the blood current and dilatation of the vessels, but also by œdema of the web, which became evident within twenty-four hours. That the congestion was not "active" was established by two facts—first, the absence of all the phenomena of inflammation, other than the amœboid movements—i. e., the primary acceleration of the blood current, the subsequent retardation with irregular contractions of the vascular walls, etc.; second that the discontinuance of the pressure on the vein was at once followed by complete restoration of the circulation in the web, whose irregularities therefore, were dependent wholly on a mechanical impediment, and not upon any "nutritive irritation," nor vascular spasm.

This experiment has been repeated twice since the above date. In both instances the same phenomena occurred; in one, emigration began within three hours after compression was made. In this instance the pressure excited, exceeded somewhat that made in the first case.

Now the value of these facts depends upon one's ideas of pathogenesis. If he believes, with Billroth, that connective tissue is developed solely from migrated blood corpuscles, he has a key at once to the connective tissue hyperplasia of the skin and venous walls, which accompanies a varicose condition of the veins. For the mechanical congestion necessarily present must result in the emigration of blood corpuscles into the surrounding

tissues, and these are developed, says Billroth, first into spindle-cells, and finally into complete connective tissue corpuscles, causing the familiar thickening of the skin and vascular walls. In support of this view is the fact that the increase in thickness in the wall of a varicose vein is due to hyperplasia, not of the muscular elements, but of the connective tissue bundles interposed among those elements, and of the outer coat of the vessel, which is composed wholly of connective tissue. So, too, the enlargement of the spleen which usually follows portal obstruction as in cirrhosis of the liver, and the thickening of the superior hæmorrhoidal veins—"hæmorrhoids"—from the same and other conditions, are to be referred, in part at least, to the development of leucocytes which have wandered from the vessels during the mechanical congestion. Perhaps, too, the areolar hyperplasia so often found with displacements of the uterus is due to the venous congestion which usually exists in that condition.

Even the conservatives, like Stricker and Rindfleisch, while insisting on the proliferation of pre-existing cells as the more important source of connective tissue hyperplasia, admit the strong probability that a considerable part of it is due to the development of the wandering cells or colorless corpuscles first into spindle-cells, then into fibrillated tissue. Certain it is that in the repair of wounds, at least, they play a prominent part in the formation of cicatricial tissue.

The fact of emigration without any evidence of that "nutritive irritation" of tissue which Virchow presumes in active hyperæmia would seem to favor Hering's view that the exit of corpuscles is a passive rather than an active movement, due to their glutinosity, to increased blood pressure and diminished blood velocity—in short, a simple filtration of colloid substances.

Then again the behavior of the small red corpuscles is interesting as exhibiting their close relation with the white, and as furnishing another link in the chain of circumstantial evidence that the red corpuscles are transformed white ones. Such has for some time been the prevalent opinion, though never completely demonstrated. The fact that these large ones were but little, if any, larger than the white, that they were of circular shape, were devoid of nuclei and possessed the power of amœboid motion,

proves their close connection with the colorless ones; while the presence of hæmo-globin, as indicated by their color, testifies to their ability to perform at least one important function of the fully developed red ones—the transportation of oxygen.

In examining further the literature of this subject, I find in Wagner's Pathology (p. 186) Charlton Bastian cited as authority for the statement published in the *British Medical Journal* for 1868, that " red globules as well as white leave the vessels in venous stases, scorbutus, etc., by means of amœboid movements." Not having had access to the files of that journal I know nothing of his observations. The red globules mentioned are probably the small ones only; certainly I failed to observe the locomotion of any large oval discs.

AN INQUIRY INTO THE DIFFICULTIES WHICH HINDER A COMPLETE REGISTRATION OF BIRTHS.

By Henry M. Lyman, M. D.

(Professor of Physiology and of Diseases of the Nervous System, Rush Medical College, Chicago.)

In the daily papers of this city appeared, not long since, a paragraph, inspired, apparently, by the State Board of Health, in which complaint was entered against the members of the medical profession on account of their neglect of the State law concerning the registration of births and deaths. A similar complaint on the part of the local health officials, last winter, led to the passage of an ordinance by the common council of the city, prescribing the infliction of a heavy fine upon any physician or midwife who should neglect to register the births which might occur in his or her practice.

Now, this disobedience is no new thing under the sun. It is only part and parcel of that indifference to legal requirements which is one of the significant and growing evils of the present time. Everywhere there is an abundance of statute law, and every legislative body at every legislative session, seems impelled, by dire

necessity, to add, not its *mite*, but its *quantum* to the existing volume. The lawyers themselves can hardly tell what is law, and what is not—so numerous and so conflicting in some of our communities have the statutes and ordinances become. Under these circumstances, the masses pursue the even tenor of their way, doing about as they please, executing such laws as meet their real wants, and leaving the rest to sink into an oblivion from which they are at length seldom resurrected except for temporary gratification of local or personal malice.

Such being the well-known facts of the case, it seems to be worth while to consider whether this state of things is necessary and irremediable. It would appear to be a reasonable expectation, when any portion of the machinery of State becomes inoperative or fails to satisfy the desires of its authors, that some one should endeavor to search out the causes of such failure. Right here, however, begins one of the chief difficulties in the way of progress. The majority of mankind are destitute of that delineative power which is necessary to every one who would lay before himself a picture of the situation to be examined; consequently they cannot perceive clearly the relations which exist between specified evils and their causes or their effects; and they are therefore incapable of anything better than a slow, blind, empirical search for remedies against the evils of which all are conscious. This same lack of imagination—the faculty which enables its possessor to realize the feelings and the necessities of other people—deadens the majority of people against the sufferings of individuals and classes not their own. Then, again, we are to such an extent creatures of habit, that the majority of mankind would prefer to endure many little ills, and wink at much petty injustice, rather than undertake to effect a change in anything that has once received the sanction of law. This love of routine, combined with lack of imagination, serves also to incapacitate the majority of us for original investigation of the local necessities of a given community with a view to the better adjustment of legislation to those necessities. The sanitary legislation of the country affords a conspicuous illustration of these facts. Instead of studying the peculiar temper and wants of our population, and evolving, in the light of the experience of older States, a system

of laws which shall meet those wants, we are much more likely to copy or to compile an abridgement of the sanitary laws of New York or Massachusetts, which in their turn have been borrowed from the laws of England or of Belgium or of Prussia. The consequence of this method is too often the hasty adoption of regulations which, however right and proper they may be in a country where people have been trained for generations to submissive acquiescence with the mandate of an absolute sovereign, are utterly at war with the principles of democratic government and individual freedom. Then, as soon as such ordinances have been transplanted from the soil of despotism in which they first struck root, they soon find shelter under the shadow of bureaucracy which in even the freest governments finds its own interest in the preservation of existing institutions, no matter how illogical or unjust they may be.

Did time permit, I fancy it would be instructive to point out the numerous illustrations of these facts which must occur to every one who thinks. I will only recur to the example with which I commenced this paper—the registration of births. Why is it so difficult to secure what all are agreed should be done? It is done in the countries of Europe. Why not as easily here? Because the organization of society is, in Europe, based on an entirely different foundation from that which exists in America. Even in so free a country as England it is but a short time, comparatively, since the mass o the population was held under the constant surveillance of the established authorities, both civil and religious. It was part of the daily duty of the country squire to know everbody in his vicinity, and to see that every one was about his own business in his own place. It was the duty of the priest to look after all the residents in his parish, making sure that every one paid his tithes, went to confession, took the communion, and had his children safely baptized. Of course it was easy enough in such a community to secure an efficient registry of births and deaths. The baptismal fee was sufficient to make it for the parson's interest to look out for every birth within his reach. Again, in Prussia, the whole nation was organized upon a military basis. Every family was responsible to some official of the government; and for ages it has been an accepted fact that the first duty of

every Prussian woman was the production of soldiers for the king. Of course, in such a state of society it seems perfectly natural that the morning report of the nation-camp should contain a return of all the additions to his majesty's forces effected during the previous night. A registry law would only give expression to the precise and artificial habits of a people under the immense pressure of a military despotism.

But when we examine a free and independent society like our own, we find that all the conditions which have made registry laws a success in the old world are still unknown in this country. We have no official class whose existence and privileges are largely dependent upon the care with which they watch the behaviour of the mass of the population. We have over us no military tyrant who must know exactly his resources in men as well as in gold. There is no such thing as a law of entail nor any aristocratic pride of pedigree to be gratified by a long ancestral roll. Consequently, there is only the curiosity of a few scientific men that can be relied upon for the moral support of a registry law. I do not believe that in our city more than a dozen people in every thousand would be found to care for the registration of their nativity even in a family Bible. How shall this difficulty be met? By law, of course. But the law does not get executed, notwithstanding the threat of a penalty for disobedience. Why do not intelligent and generally honorable people, like physicians, obey the law? For two reasons; because they have no personal interest in its execution, and because of an invincible, though perhaps not always clearly recognized feeling of revolt against the essential injustice of the law as it now stands. The present law imposes upon every physician and midwife a special tax in the shape of postage, to say nothing of time occupied in making the returns, and offers no compensation for the extra labor and expense. This is an unjust discrimination against a certain class of citizens.

The commonwealth has the right to demand the services of its citizens, but in no free community has it the right to take such services without compensation. In the words of an eminent English statesmen, "People do not like to make a present to government in any shape or form."

The attempt to impose such a tax is a survival of Asiatic methods of despotism which are only tolerable in an autocratic system of government, where the will of the ruler is sufficient reason for any confiscation which may be practiced upon the property of the subject. It is the instinctive appreciation of this fact which lies at the foundation of the difficulty experienced in securing returns from our physicians. What is the proper remedy? The remedy which naturally suggests itself to the "uncultivated intellect," as one of the greatest of living statesmen styles such a mind, consists in the imposition of a heavy penalty for infraction of the law; and if that fails, an increase of severity is the next resource.

"Tell a person of uncultivated intelligence that any grave crime is increasing, and his first idea will invariably be to increase the severity of the punishment which is assigned to it. Tell him that it is very difficult to get evidence with regard to some particular crime, and the chances are that, if he does not *say*, he will *think* that a little mild judicial torture might have its advantages."—*Nineteenth Century*, May, 1878, p. 811.

But experience—and this method has been tried again and again without success—shows that penalties do not secure obedience. A law which is based upon no public sentiment in its favor, cannot be executed without the previous erection of a vast system of espionage which will never be tolerated in our country. The officials who are now charged with the registration of births might as well try to note the crossing of flies in the air as to follow up all the parturient women in the State. They might occasionally catch and fine an unlucky doctor, but the result would only be an accumulation of indignation against the executors of an unjust law, which would soon effect its repeal.

What, then, is the remedy for this state of things? I do not flatter myself that it is possible to suggest anything which will cover all the necessities created by indolence, carelessness and stupidity on the part of both doctors and officials, but I do believe that something may be done to improve the present situation. The first thing needful is the removal of all unjust discrimination against a particular class of people—the doctors and midwives. It costs postage and envelopes, as well as time, to

make these returns. The amount is not large to be sure; but it is as unjust for the State to add fifty cents to a doctor's taxes simply because he is a doctor, as it would be to add fifty dollars. The principle of the thing is the same in either case. It is discrimination against a particular class without a return of corresponding advantages. The State should pay for all such services just as it pays for every other service which is rendered by citizens. It need not incur any great expense—it might, as in the case of jury duty or military service by conscription, fix its own rate of compensation; but the obligation should be recognized, and the principle for which I contend should be preserved. It will not do to attempt the evasion of this argument by saying that the physician is already paid to make these returns, for such is not the fact. The fees of physicians are regulated by long established custom, and any additional charge in the bill would now meet with no more favor than the action of the horse-railway companies when they were allowed by law to collect from each passenger an extra cent to compensate themselves for the tax of a fraction of a cent on each fare. These services are either worth something or they are worth nothing. If they are worth nothing, the infliction of penalties for their refusal is absurd. If they are worth something, they should be paid for by the commonwealth for whose benefit they are rendered. But this would require increased general taxation. Of course it would; and this increase would then be levied on all alike instead of being thrown, as it now is, upon the doctors and midwives alone. Just here lies the whole difficulty in a nut-shell. The health officers are trying to get service from the doctors without paying for it. This was once tried on a considerable scale by our local Board of Health in the matter of sanitary inspection. The matter was finally referred to the courts, and they decided that services rendered to the community must be paid for, and they were accordingly paid for at the rate of one hundred dollars a head. The only difference between the two cases consists in the fact that in one instance the amount at stake was a large one, while in the other it is comparatively a trifle. The principle involved is, however, the same in both cases, and until this is recognized and respected, it will be useless to hope for complete and willing returns of births. Law-

makers who wish to suceed in the enforcement of their laws must first be sure that they are just. Of course, it will be objected to all this by the bureaucrats, that such a scheme is impracticable and cannot be put into execution. In reply to this I would merely say that the official who has not ingenuity sufficient to contrive a method by which all the necessary details of such a plan can be carried into execution without any increase of the present machinery of government, or the necessity for any actual disbursement of money, is not fit to perform the functions of a *legislator*, at least. The whole thing may be done more easily than the taxes are collected. But if, as usual, we must wait for an example from Germany or Holland, we shall have to wait a long time for justice, for, to use the words of the talented author of "Anson's Voyage Around the World," "Human affairs are not always conducted by the plain dictates of common sense. There are many other principles which influence our transactions. And there is one in particular which, though of a very erroneous complexion, is scarcely ever excluded from our most serious deliberations. I mean custom, or the practice of those who have preceded us. This is usually a power too mighty for reason to grapple with; and is the most terrible to those who oppose it, as it has much of superstition in its nature, and pursues all those who question its authority with unrelenting vehemence."

We call the attention of the editors of the London *Medical Press and Circular* to the fact that the *Chicago Medical Times* (from which they have made certain excerpts in their number for July 17, 1878, and which they seem disposed to regard as an exponent of regular medicine) is the diminutive organ of the still more diminutive Eclectic sect of medicine men in this city.

Clinical Reports.

MERCY HOSPITAL.

Two Cases of Lithotomy, Performed by Dr. Andrews, June 13th.

REPORTED BY F. E. WAXHAM, M. D.

Case 1. E. R. H., æt 30. Entered the hospital June 5th, 1878. The patient was very much emaciated, and his lungs affected with tuberculosis. He stated that he had cystitis of six years' standing, which commenced with pain in the bladder, and a frequent desire to urinate. The disease increased in severity for a year, when he began to submit himself to treatment; he then gradually improved. The sound was introduced into the bladder at two different times, but no calculus discovered. He remained quite comfortable until the fall of 1877, when he began to get worse, and was obliged to give up work. The pain left the bladder and had centered in the urethra, which became extremely sensitive. Upon entering the hospital, he was obliged to pass water every few moments, in great pain, the urine containing a large amount of mucus and pus. The urethra was so sensitive that the softest flexible catheter could not be introduced into the bladder. Soothing injections were frequently practiced in the urethra to control the hyperæsthesia. As he could not endure the introduction of a sound, he was anæsthetized with ether, June 13th. A partial stricture was discovered about five inches from the meatus; this was dilated, and after much difficulty a sound introduced into the bladder. A calculus being found, lithotomy was at once decided upon, as it was not considered a favorable case for lithotrity on account of the great sensitiveness of the urethra. The patient was placed in the lithotomy position, but it was found impossible to introduce the staff. A long beaked

instrument could be passed into the bladder, but one with a short curve could not. The sound was introduced and the incision made upon it using a grooved director in conjunction with it in place of the staff. The calculus was removed without difficulty, and weighed 8 grams. After recovering from the anæsthetic he suffered much pain, and required large doses of opium to obtain relief. The intense pain and frequent desire to pass water, soon subsided, and the patient gradually improved, although the wound has been slow in healing, a portion of the urine still passing through the wound. The patient left the hospital July 22. Time in hospital, 47 days.

Case 2. Edward Cloonan, æt 15 years. Entered the hospital June 12th. Has suffered from pain in the penis, and frequent desire to pass water, for three years. A year ago a sound was introduced into the bladder, and a large stone detected. The father objected to an operation at that time, as he had lost one child only a few months previous, from the same cause, lithotomy having been performed. Upon entering the hospital the patient was in a good condition physically. June 13th, gave ether and performed lithotomy. Great difficulty was experienced in removing the calculus on account of its large size. The tissues were bruised and lacerated to a considerable extent. The calculus measured 7 centimeters in length and 4½ centimeters in thickness, and weighed 72 grams. Notwithstanding the unfavorable prognosis, on account of the contusion of the tissues, he made a rapid recovery, suffering no pain and requiring no anodynes. Patient left the hospital July 13th. The wound was entirely closed, and the urine passed freely through the penis. Time in hospital, 31 days.

NOTES FROM PRIVATE PRACTICE.

Calculus of the Size of a Grain of Wheat Detected by the new Auscultating Searcher.

In the June number of the JOURNAL AND EXAMINER, I described and figured a new searcher for detecting minute calculi or their fragments in the bladder. It will be remembered

that the searcher was made hollow, and had attached to the external extremity a slender rubber tube and ear piece, by means of which the slightest touch of a bit of calculus in the bladder sent a distinct sound to the ear of the surgeon.

A recent case illustrates the extreme delicacy of this instrument. Mr. A. B. had, a few weeks ago, an attack of severe pain, which, from his description, I presume to have been caused by the descent of a small calculus along the ureter. From this time on, he had mild symptoms of stone in the bladder and came to the city for treatment. Introducing the auscultating searcher, I distinctly heard the tick of a stone, which was so small that it gave no jar perceptible to the fingers. I immediately introduced a very small lithotrite, seized the calculus, and drew it out. It was about as large as a grain of wheat. I searched repeatedly for other fragments during the next few days, but found no more, and no further symptoms of stone appearing, I dismissed the patient as cured. This case afforded a most satisfactory test of the delicacy of the instrument.

Since describing my instrument in the June number of this journal, Sir Henry Thompson has brought out quite a different one in London, having the same object in view. He has a galvanic battery and a microphone attached to an ordinary searcher, so as to magnify the sound produced by striking the stone. The apparatus is extremely ingenious, and gives the sounds well, but the formidable incumbrance of a battery, a microphone, etc., must seriously impair its convenience. On that account, I cannot help thinking that my instrument will be found the most useful.

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A Visceral Æsthesio-Neurosis.

As a sequel to enteric disease, it has twice lately fallen to my lot to observe a distressing and tenacious symptom which may properly be classed among the visceral æsthesio-neuroses. It is a hyperalgesia and a dysæsthesia referred to the region of the umbilicus, but radiating probably from the nerves which preside over the excretory function of the colon, to be finally interpreted

by the higher centers. The first case was that of a physician who had suffered from colitis; the second that of a lady 60 years of age, who had passed through typhoid fever. The primary disease in both cases occurred between six and seven years ago. So close is the resemblance between the two cases that I venture to report them together. There is abnormal sensibility in the large intestine, and pain is the inevitable consequence of even a small fœcal accumulation, which calls into play the reflex action. As the morning approaches, the sleep is disturbed, and at five o'clock precisely, and daily (with only an occasional intermission, sometimes lasting for weeks), the pain sets in. The pain continues until there is an evacuation at about seven, and then gradually dies away. It does not recur in the daytime, except under the influence of sudden change in atmospheric pressure, of mental emotion, fatigue, indigestion, etc. Its periodicity and its tendency to excitation under psychic and nervous influences, shows its character to be essentially neurotic. There is doubtless some slight organic alteration of the mucous surfaces—the terminal ends of the nerves infringed upon or altered, so as, in a measure, to interfere with normal conduction of impressions. Under unusually exciting conditions, there is a free discharge of mucus. As in hepatic and enteric disturbances, generally, there is in these cases a degree of cerebro-hyposthenia and the patients are unduly anxious about themselves. It is to be lamented that they have both resorted to opium as the only "stayer of anguish." But I am gradually getting them to rely on other measures, and I have done much already by psycho-physical methods, by regimen, by tincture of colocynth and the surreptitious substitution of a *placebo* for the narcotic which in my opinion the circumstances amply justify.

JAMES I. TUCKER, M. D., *Chicago.*

"*On the Treatment of the Bowel Affections of Infancy and Childhood Incident to the Summer Months.*"

In the August Number of the JOURNAL AND EXAMINER appears an article by Dr. DeLaskie Miller, on the above-named subject, really valuable, and embodying more common-sense in the treatment and hygiene than can be found elsewhere. Yet it seems to

me that the most important factor in the management of these cases has been omitted. However important in the causation of the diseases under discussion may be a vitiated atmosphere and improper diet, it is quite certain that without a high temperature in addition, these diseases would not occur. With a pure atmosphere and good diet we have the same class of cases in the country. Heat is surely there the important factor in the production of "summer complaint." To reduce the temperature, then is the primary indication. Each little patient should be wrapped in a wet sheet extending from the axillæ to the knees, and kept in a *recumbent position.* The head should be freely bathed with cool water if hot, and no food given for the first twenty-four hours, only a little cold water if it can be had pure. Thus the temperature of the body should be *reduced to the natural standard and kept so, as nearly as possible.* If we could give our patients pure, cool air to breathe in addition, little would be left for the medication which Dr. Miller has so well summed up.

After the first day or two the activity of the fever usually subsides, but the wet sheet should be continued until the evacuations become healthy, and then replaced with a flannel band to support the abdomen. I append a typical case as the disease appears here.

J. F., one year old, a strong, well-nourished boy, fed with cow's milk from a nursing bottle. Aug. 10th. Feverish and restless; did not take food as well as usual. Aug. 11th. Increase of fever, bowels loose, ate part of an apple; p. m., vomiting and purging. At six (evening) I was called in, and found the child in its first convulsion, head hot, feet and hands cool, pulse 140. He had vomited five or six times during the previous four hours, and purged as often, the evacuations being watery with mucus and spots of blood on the diapers.

Treatment.—Free application of cold water to the head, the body wrapped in a cool wet sheet from arm pits to the knees. Hot cloths to the feet and legs. The child recovered from the convulsion and became sensible in about half an hour. No recurrence. At 9 p. m. child feverish and restless, pulse 115. Gave a mixture containing six drops of paregoric and six drops of syrup of ipecac every hour until quieted. Also kept on the wet

pack, and kept the head cool by bathing. No food. Aug. 12th. a. m. Child slept three or four hours, and has had three evacuations of the bowels; no vomiting; is still a little feverish, pulse 108; wants food. I directed 50 Gms. boiled milk every three hours, and a tablespoonful of cool water every half hour, if thirsty. Continue the wet sheet and give paregoric and ipecac every two hours. Evening. He had two evacuations to-day, the last one small and healthy-looking; skin cool and moist; head cool; playful. I directed a flannel bandage to be placed around the abdomen and strict attention to be paid to the diet. No medicine. Dismissed.

P. A. ALLAIRE,
Aurora, Ill.

WE are pleased to note that the adoption of the metric system in the pages of this journal has already produced most desirable results. Our exchanges have given us due credit as the first of American medical journals to take this decided step; and a few have not hesitated to follow in the same path. Many of the practitioners in Chicago have already begun to employ the system exclusively in the writing of their prescriptions, and all of our really high-class druggists have prepared themselves to compound medicines so ordered.

We have received many acknowledgments of the benefits derived from the change, and have every reason to congratulate ourselves upon the result.

WE have received from the American Metric Bureau a number of slips convenient for carrying in a physician's call book, which explain the metric system so that it becomes not only intelligible but of practical value. We will be pleased to distribute them to physicians who will enquire for the same at the Library rooms, No. 188 South Clark st.

Society Reports.

NATIONAL SOCIETY OF MICROSCOPISTS.

(Reported by W. T. Belfield, M. D.)

The National Microscopical Congress, which has just closed its labors at Indianapolis by resolving itself into a permanent organization—the National Society of Microscopists—has completely vindicated the right of microscopy to recognition, if not as a distinct science, certainly as a distinct method of scientific investigation. The generally good quality of the work presented by individuals and the advanced position assumed by the members collectively—by the virtual endorsement of wide-angled lenses and by the formal adoption of the millimeter as the unit for micrometric measurement—must give an impetus and dignity to microscopy which will be apparent in the work of the coming year, and in the increased attendance at the next session. Conceived as a mere experiment, called in the very teeth of the microscopical subsection of the American Association for the Advancement of Science, it assembled thirty delegates from all parts of the Union between New York and California—some of 'them men with national reputations. They came actuated, as their work proved, by a scientific spirit, and returned well pleased with its manifestation in one another.

Limited space permits only the briefest summary of the proceedings. On the first day the principal feature was a paper by Prof. Rogers, of Cambridge, embodying the result of a year's faithful labor under peculiarly favorable circumstances—a monument to the author's untiring energy and industry. He demonstrated the possibility of far greater delicacy and accuracy of micrometry than has been used, and clinched his arguments by the presentation of a plate whose rulings showed a maximum error of

$\frac{7}{1,000,000}$ inch. Members were invited to compare and correct their micrometers by this standard. The second day was devoted chiefly to the "war of the lenses." Prof. J. E. Smith, of Cleveland, and Dr. G. E. Blackham, of Dunkirk, couching the lance for the high angle, while Prof. R. Hitchcock, of New York, battled for the low. On this, as on every previous occasion, each side claimed the victory; yet judging from the number of conversions from low to high-angled lenses, we may safely credit to the champions of the latter a fair degree of success. Indeed, with all deference to the admirable papers presented, the conversions were made not so much by the arguments advanced as by the actual demonstration on the spot of the superiority of the wide-angled glasses, when properly handled, in accomplishing every result required of the microscope.

In all probability the war will last but little longer. One after another the champions of the narrow angles, from Col. Woodward down, have surrendered, and it now remains simply to diffuse a knowledge of that fact among the rank and file, and let the leaven work.

The third day was given to micrometry, and resulted in the formal recommendation to microscopists that the interests of science would be advanced by the general adoption of the millimeter as the micrometric unit. The general approval with which the proposition was received showed that its advisability was recognized.

The fourth and last day was given to miscellaneous papers and to permanent organization. To such action there was considerable objection, a large faction favoring annexation to the American Association for the Advancement of Science. A majority, however, deemed the subject worthy of independent recognition, and such was secured.

While the papers were as a rule excellent, the most valuable and interesting work was done at informal sessions in individual study. It was practically a division into sections by natural selection, where those following the same lines of study interchanged opinions and arguments about their hobbies, illustrating their views and defending their positions by practical demonstrations with their microscopes. On these occasions, too, there was much

exhibition and comparison of instruments, objectives, slides, and all the paraphernalia of the microscopist, so bewildering to the uninitiated. In these soirées the writer was impressed with the lack of proficiency shown by the medical microscopists. It seems strange that lawyers, merchants, clergymen and accountants who use the microscope as a scientific luxury should so far excel physicians, who derive direct pecuniary benefit from its use. Yet such was generally the case. A list of the papers read, or even a synopsis of the principal ones, would take more space than is allotted to this subject. The writer can not forbear calling attention, however, to the paper of Prof. Rogers, already referred to; that of Dr. Blackham, on "Angular Apertures;" of Dr. Ward, on "Recent Progress in Microscopic Ruling;" and the "Angle of Aperture," by Prof. R. Hitchcock.

The session closed with a grand soirée, at which 3,000 fashionably attired persons jostled one another for a chance to gaze for an instant through an instrument that they didn't understand, at an object that they knew nothing about, and thus to verify their oft repeated exclamation, "How strange!" Yet we were thus enabled to show our appreciation of the hearty hospitality for which the good people of Indianapolis are justly celebrated, and which they exhibited to perfection toward us.

INDIANAPOLIS, August 17, 1878.

MICHIGAN STATE BOARD OF HEALTH.

The regular quarterly meeting of the Michigan State Board of Health occurred July 9, 1878, at Lansing, all the members being present.

Dr. Hitchcock offered the following resolutions, which were adopted:

Resolved, That this board respectfully request the board of regents of the University of Michigan and the trustees of the Detroit Medical College to establish in their respective institutions, at the earliest practicable moment, full chairs of public hygiene and fill the same with thoroughly competent professors.

Resolved, That this board respectfully request the controling

board of all the collegiate institutions as well as the high-schools of the State to see that a course of instruction in public hygiene be given in each of their several institutions.

Dr. Kedzie presented some results of his investigations on the subject of lead-poisoning by means of tinned ware and other vessels containing lead.

He said it is well-known that there are substances actively poisonous when taken in large doses, that when taken in small but repeated doses often produce effects so obscure that they may be mistaken for the symptoms of some chronic disease. Lead, arsenic, antimony, and copper are examples.

The chronic poisoning which may be caused by minute doses of any of these metals, and the possibility of mistaking such metallic poisoning for some disease of a different nature, should warn us against their use, or make us careful and guarded while using them. Vessels in daily use for preparation or serving of food are especially liable to affect the physical condition if they contain any material which will insidiously sap the foundations of health and strength.

Culinary vessels which are cheap, durable, and convenient, and without injurious influences on the health, bear an important relation to the comfort and well-being of the people. Of all cheap metals for such use tin fulfills those conditions better than any other. It is compartively cheap, resists oxidation by exposure to air and water, has a white color, is not readily dissolved except by strong mineral acids, and the only salt of tin which is actively poisonous is the chloride, which will never be formed in the domestic use of tin vessels. The readiness with which iron surfaces may be coated over with it contributes to its valuable uses.

Unfortunately, while tin is comparatively cheap and safe, lead is cheaper and very dangerous. Yet the two metals readily unite forming an alloy which may be used in place of tin, but which will generally oxidize and be dissolved by acids more readily than either metal of which it is composed. The danger of poisoning by the use of such vessels is very great. The attention of the State board of health has been called to this subject by a letter from Dr. Dorsch of Monroe, who writes that he has seen cases of *paralysis agitans* which had been taken for chorea, although other symptoms of

lead-poisoning were present, and investigation showed, in all cases, that cooking and eating with tin spoons or in earthen and iron vessels with a coat of lead were the cause. The same is true with milk vessels. The acid dissolved the lead salts, and children are poisoned, dying by tubercles of the brain, meningitis, fits, and paralytic affections.

Grown persons do not escape, although resisting longer. A similar danger arises from tea and coffee pots of earthern ware or composition metal, from tin sieves and funnels, and almost all cooking utensils used by the poor. They are about equally as dangerous as the adulteration of food and spices, so common all over the country.

The danger of lead-poisoning is a matter of great importance because so large a proportion of our population employ tinned vessels for culinary and table use. The alloy of tin and lead oxidizes much more readily than pure tin, and the oxide of lead is very soluble in acetic acid or vinegar, or lactic acid, forming sugar of lead. It also forms salts with malic and citric acids, which are contained in apples, cherries, gooseberries, currants, or any acid fruits. When cooked in vessels containing lead or even placed in them for some time, they are liable to take it up and become very injurious thereby, because all salts of lead are poisonous. In this way a large portion of our daily food may be a vehicle of poison if prepared or contained in vessels containing a sensible amount; and this danger is greater because the compounds of lead are cumulative in their influence. A person may not be poisoned by one or two small doses, but minute doses taken for a long time will break the health and even destroy life.

The doctor said that of a large number of specimens of tin plate, tinned iron, and other culinary articles examined by him, he found in almost every instance an alloy with lead, and it was often present in large quantities. It is an astonishing fact that a large proportion of the tinned wares in the market are unfit for use because of the large quantity of lead with which the tin is alloyed.

TEST FOR LEAD.

Place a drop of strong nitric acid on the tinned surface and rub it over a space as large as a dime. Warm it very gently till dry, and then drop two drops of a solution of idodide of potassium on

this spot. The bright yellow iodide of lead will form on the spot if tin contains lead. This test can be rapidly applied and the results are decisive. The doctor was informed that a peculiar kind of tin plate, the tinning composed mostly if not entirely of lead, was coming into general use for roofing eave troughs, and water pipes. The lead thus exposed would be in conditions favorable for oxidation, and a quantity of oxide and carbonate of lead would be washed away in the rain water and deposited in the cistern with every storm. Susceptible persons may be poisoned by washing in such lead-charged water, and all persons drinking it even after it has been filtered will be in danger of chronic lead poisoning. Earthen vessels are usually glazed to overcome their porosity. In many cases this glazing consists of fusible silicates of the alkalies, and alkaline earths. These have no injurious influence on the health. Oxide of lead when added to the alkaline silicates, borates, etc., makes a very fusible and closely adhering glazing; and is sometime used, but its use is very dangerous, especially if the vessels contain acid substances. The glazing decomposes and lead salts form which either dissolve or are mechanically suspended in the contents of the jar, and there is great danger of chronic lead-poisoning. This danger is unfortunately very common.

ENAMELED IRON VESSELS.

Within a short time an enamel has been successfully applied to vessels made of iron plate, the enamel or glazing taking the place of tin coating on tin plate. As these vessels are coming into general use it is a matter of public interest to know what would be their influence on public health. He said that a culinary vessel to be safe must be impermeable by water and grease. Metals, especially where vessels are made without seams or joints, such as pressed tinware, glass, and many kinds of porcelain, are admirable in this respect. Glazed crockery after the glazing is fissured is very poor in this respect. If the new enameled ware shall prove satisfactory it will be an important acquisition. At the present time the most hopeful outlook for good, safe, and cheap culinary vessels lies in the direction of some fixed unabsorbent enamel for pressed iron-ware which will maintain an unbroken surface under all conditions of domestic use.

Another indispensable condition for a safe culinary vessel is that it shall not contain any poisonus material by which the food cooked or contained in it, shall be injuriously affected.

The specimens of granite-ware which he had examined failed to reveal any poisonous or injurious substance. He regarded it as a safe material to use, but feared its power to resist the tendency to crack after it had been frequently heated. The marbleized iron-ware presented very different results. The enamel was found to contain a large amount of lead, and even traces of arsenic were obtained fron the enamel by the use of Marsh's apparatus. In a quart basin of this marbleized iron-ware he placed eight ounces of water containing five per cent of nitric acid, heated it boiling hot, and kept the whole in a warm place 24 hours, then evaporated the dilute acid to dryness, dissolved the residue in water, filtered, and from the filtrate precipitated the lead, obtaining in this way what was equivalent to 23 grains of lead. In a similar basin of marbleized iron-ware eight ounces of vinegar (free from lead) were placed and kept in a warm place 24 hours, and then treated in the same manner as the dilute acid. This resulted in obtaining what was equivalent to seven grains of lead. On powdering some of of the enamel and heating it with concentrated acids, very distinct traces of arsenic were obtained. This was probably not present by design, but accidentally from being contained in some of the substances used in making the enamel. A culinary vessel which contains so much lead, and in such a state of feeble combination that eight ounces of ordinary cider vinegar can in 24 hours dissolve from a quart basin what is equivalent to seven grains of metallic lead, must be a very unsafe vessel for general use.

CHICAGO MEDICAL SOCIETY.

Meeting of August 5, 1878, at the Grand Pacific Hotel. The President, Dr. E. Ingals, in the chair. Fifty members present.

Dr. Tilley exhibited the microphone, illustrating its construction by several instruments. The friction caused by the movement of a camel's hair brush across the frame of the instrument was rendered quite audible to several persons at once, and the

ticking of a watch was distinctly heard at several telephones at the same time. Dr. T. expressed the opinion that at present the instrument did not promise any advantage over the instruments already in use for physical diagnosis, corroborating the opinion expressed by Dr. Clement Dufries, of England. Attention was called to a certain resemblance between the instrument and the middle ear, the resemblance being illustrated by a microphone the frame of which was a wooden ointment box. The instrument itself is of the most simple construction, consisting of three small pieces of carbon, held in position by a framework of wood, two of the pieces being attached firmly to the frame work by a wire forming part of an electric circuit being connected with each piece. The third piece is held loosely between the other two pieces, the points of contact being rendered as fine as possible. The battery used was composed of two chloride of ammonium cells, but a more powerful battery would have been more effective. As a receiver of the sound the telephone is necessary.

Under the head of miscellaneous business the following resolutions were presented with reference to an advertisement which had appeared in the daily papers, displaying the names and titles of a number of Chicago physicians.

Resolved, 1st, That the Chicago Medical Society considers this advertisement an offense to the honor and dignity of the medical profession.

2d. That the secretary be instructed to notify these physicians that their names are being used in this manner, and request of them an explanation.

After considerable discussion, the resolutions were adopted by an almost unanimous vote.

COMPLIMENTS OF THE SEASON.—"THE CHICAGO MEDICAL JOURNAL AND EXAMINER * * always spirited, high-toned and able."—*Edinburgh Medical Journal*, May, 1878.

Selection.

MEDICAL EDUCATION IN FRANCE.

THE WAY MEDICAL APPOINTMENTS ARE SECURED — THE OVERCROWDED PROFESSION IN THE UNITED STATES, AND OUR MEDICAL COLLEGES. VAGINAL EXAMINATIONS IN PARIS. THE PAQUELIN CUATERY.

To the Editor of the Medical Record:

SIR:—If I had the wealth of a Vanderbilt or an Astor, I would advertise a free excursion ticket and a week in Paris to ten thousand of our medical men, on the sole condition that during that time they made themselves familiar with the system of medical education and appointments in vogue here, and witnessed a public examination. This examination, or *concours*, is the admirable machinery by which the results of prolonged application are determined and the rewards adjudged to the meritorious. A man needs no friends, no influence, provided he has brain-power. Let him work. Step by step he rises, until he reaches the goal —eligibility for appointment to one of the chairs of the *Ecole de Médecine*. This is the sole position to which candidates are directly appointed without previous immediate competition by *concours*, and possibly some wire-pulling may ultimately determine a choice. But here is an embarrassment of riches. The government is jealous of a school that has had for teachers such men as Orfila, Trousseau, Cruveilhier, Malgaigne, Berard, Nélaton, and Velpeau—jealous, I mean, of the repute and lustre of the past lights, and there is no chance, no possibility of an unworthy appointment. It is a precedent, so far as I know never violated, to take the new incumbent from the list of *professeurs agrégés*, and when one knows the innumerable tests to which it is necessary to sub-

mit before one is permitted to write *agrégé* after his name, it is certain that if wire-pulling is employed, it is because of the equally extensive attainments of those who are eligible. When men know everything about medicine, it is impossible to say that one candidate is more worthy than another.

My reason for desiring, as a possibility, a great number of American physicians to come and see the methods here is, that I doubt not some improvement will result therefrom to our own wretched system. Patriotism is all very well in its place, but I am not one of those representatives of the great republic who go about the Old World resolved to find nothing there in which America cannot lick all creation. Indeed, if I had not my hospital certificate to fall back upon, I doubt whether I would announce myself as the bearer of an American diploma. The youngster with his new parchment, certifying to his being a *virum probum*, and all the rest of it, proud of honors won by a diligent grubbing upon Neil and Smith's Compendium, will receive a great shock when he learns that he is suspected of having obtained his document by an equivalent of money and nothing else, for these Frenchmen know well that to obtain a *bona fide* diploma from the best New York schools, the money is the main thing, and consequently they hold his cherished possession in the most particular contempt. Are they not fully justified? To graduate here, a native must first have his baccalaureate diploma. The School of Medicine does not even accord a matriculating examination to French students. The latter must first be prepared by general for professional study. There are five separate examinations to pass, and at the beginning of every third month the student must take an "inscription," that is, register his name at the bureau of the Faculty. After four inscriptions, he is allowed to come up for examination in chemistry, natural history and botany. After the twelfth inscription, the second examination takes place. This is in anatomy and physiology. At the end of the fourth year, the sixteen inscriptions having been made, pathology, hygiene, legal medicine, pharmacy, materia medica and therapeutics are the subjects for examination. The last examination—the fifth—is instituted at the Hôtel Dieu or La Charité. This is a practical test. The thesis amounts to something else than a re-

hashed chapter of a text-book. It is printed, and if exceptionally good, lays the foundation of a reputation for the author. Lastly, students serve in the hospitals, and go through the wards with the professors.

There is real clinical instruction—not merely talks to several hundred persons assembled in an amphitheatre. Let the newly-made M. D. of one of our New York schools ponder on these things, especially if he has taken two full courses; the first, at a winter college, the second, the ensuing spring, at one of those accommodating institutions specially organized so that a man can assume all the honors of graduation after paying his money—this always first—and attending, or strictly speaking, waiting during a course of lecturing of eight months. Medical men here know these things, and very properly decline to consider the product of our own ridicuously superficial and inadequate course worthy of any comparison with their thorough training of aspirants for a degree. Their own professors are men of eminence who have won their positions and are paid by the government; they know that in our numerous schools the professors appoint themselves, and by public advertisement and underbidding—such as is found in the circulars of some of our colleges, addressed to physicians and offering to discount the cost of a course to their students—compete for the prize of a large class. Here the only interest of the examiners is to determine the fitness of the candidate to assume the honors of his profession, and they rather enjoy plucking the unlucky dullard! With us self-interest, the money paid, and numerous considerations equally pertinent, combine to insure tender treatment at examinations, and the individual whose gross ignorance and stupidity compel his rejection at the hands of the more important school, can search further with the certainty of finding some impecunious "university" glad to render him full equivalent for his fees.

Here, when a hospital position is vacant, they do not load some well-known name with the additional title, or push a nonentity into the place, to the amazement of those who wonder by what elaborate machinery of wheels within wheels this kind of business is done while the seat is yet warm from the previous occupant. On the contrary, a general public announcement invites

those who are entitled, by reason of many previous competitions, to hand in their names, accompanied by their contributions to medical literature, and a record of honors, past and present. This is but preliminary to a new and formidable test, and the decision is made by strict, impartial, skilled judges of the quality of brains—judges who themselves have proved, likewise by public *concours*, their fitness to sit in such a tribunal. These men have heard of our beautiful and simple process, known to the vulgar as *boosting*. They know how a man who walks on the stage at Steinway's, or the Academy of Music, to the music of the band, and after having been prayed over, to receive a dummy diploma with blue ribbons, may have invisible letters marking him as the special *protégé* of the faculty and the certain future incumbent of a vacant or specially-created chair. It is understood here that the favorite will readily obtain a dispensary position and a "professorship;" that next he will be found airing his anatomy as a demonstrator, and as the proprietor of a favored "quiz;" that, *presto!* the spring is touched, and the humble set of poor practitioners who knew him as a classmate—then not distinguished for anything in particular—look up to him standing on the dizzy heights of a full professorship. Here there are complaints of the overcrowded state of the profession in France, yet the bulletin board of the medical school contains at the present moment no less than ten different appeals from this or that mayor begging a doctor to come and settle in his locality, guaranteeing board, providing the indispensable *voiture*, and offering a stipend of from one to three thousand francs—this sum being over and above the receipts from practice. If a man chooses to work he is absolutely sure of success. There are numerous positions, salaried and desirable, open to any member of the French faculty; but for these there is first the inevitable *concours*.

Is it possible for us in America ever to have a better system? It is only by personal appreciation of the way medical matters are managed here and in Germany, even in England, that the shame and scandal of the way of doing similar things at home force themselves with effect upon the observer. This subject can never be old or trite until the disinterested part of the profession take matters in their own hands, and not merely demand but

work reform. Here the profession is under governmental supervision, in governmental pay; a multitude of venerable forms appertain to it, and the machinery works with the ease and noiselessness that results when time wears away all points of friction. It is as idle as undesirable to wish for legislation on the subject in the United States. Congress has no proper concern with us, but reform is the proper function of the body of intelligent young medical men who must know and feel the disgrace that attaches to us from a system of education that permits a ploughboy or a day laborer, with the one single and only indispensable requisite of a little money, to take his seat on a bench to hear lectures on subjects the very terms of which fall on his ear as the words of a foreign language, and, after eight months—possibly of continuous real or nominal attendance—to be turned loose on society to practice on its infirmities, and to talk in bad English virtuously and indignantly against the quacks. Besides, it is against all reason that the annual spring tides of M. D.'s, fledged by the patent incubating process, are thrown, year after year, on the community, to diminish still further the absurd figure, 600, expressive of the number of people to which there is one physician. Who is benefited by this host of annual accessions—the hosts themselves? No. The body of the profession? How many times has it happened that a new-comer in a locality settled and was doing fairly, with a constituency just sufficient to keep him so, when the next year one, two or three fresh aspirants, direct from college, came to the neighborhood, spoiled his own business, and went on starvation rations themselves? Is the community at large benefited by new accessions to our ranks? In one respect only: the cheat, whose credit is exhausted everywhere else, can always find a physician to serve him without fee. Who then remains to be benefited by the spring hordes? The thousand professors who compose the faculties of the private speculations known as colleges. It seems that for these favored individuals everybody else must suffer. Many of these institutions are rich. They control all the patronage, so that necessarily eminent men belong to them as teachers. To speak the truth about them is not the way to preferment, but the majority of us had better

make up our minds that we can't all be professors, and try for something that united action will make attainable.

I started to write about Paris medical matters, and have gone off riding a hobby instead. The fact that hospitals have their clinics and shows at eight or nine o'clock in the morning makes the effort to attend bad for lazy people. Fortunately I am located near that model of hospital structure, the new Hôtel Dieu, and most of my sight-seeing has been there. Richet, the crack surgeon, is getting old, and shows much shining pate. I never saw a man examine a case more thoroughly. Jolly little Kusco, or Cusco, him of speculum fame, I believe, handles women in a way that would excite execration at home, and which I can't believe is proper anywhere. To expose women from their feet to their breasts, without the comforting pretense of a sheet, and to punch their abdomens as if he was going to dig the uteri out through the walls, is not the way to make the examination chair a joy and delight. I saw one young woman of some personal attractions, and who seemed to have some modesty left, although she was a low-class French woman, tremble as if in ague during the ordeal, and shriek with pain when he forced his very short fore-finger up to the cervix as if he intended to carry all before him. The benzine cautery is much used here. The most painful operation I ever saw without an anæsthetic was a sarcoma removed from the root of the neck. An incision was made around the base of the tumor, save that two little isthmuses of skin were left above and below until the growth had been severed from its connections beneath. These bands of tissue were burned across, and the vessels cauterized at the same time. Lastly, the islands of skin were *burned* through. Save this last feature, the operation struck me as just the procedure for dangerous situations. But it had an unpleasant suggestion of the time they amputated with red-hot knives, and Ambrose Paré, could he have seen it, would doubtless have been scandalized at the abandonment of the ligature.

The most striking thing to a New Yorker about this hospital is the building itself. Save that palace for paupers—the new St. Thomas' hospital in London—the Hôtel Dieu is unquestionably the finest structure of the kind in Paris or London. It contains

at present only six hundred beds. A number are yet to be added, but it covers a much larger space than Charity or Bellevue, and in appointments and service is only rivaled by the New York Hospital. I suppose our commissioners would give up the ghost if it were proposed to put up a building for a public hospital with the corridors and two immensely long covered galleries of fine dressed stone, without a suspicion of plaster; where each one of a long line of stone columns must have cost a large sum; where a chapel of really tasteful architecture looks as solid as if it had been taken bodily from a part of *Notre Dame;* where a steam engine runs day and night to fan fresh air into the wards; where every appointment is of the most costly description; and where, last but not least, the patients are addressed as *messieures* and *mesdames les malades.*

PARIS, France. T. K. CRUSE.

A FABLE.—A black Crow, with a white neck-tie and gold Eyeglasses, was once perched on a Limb of the Law of Ethics, having in his beak a Big piece of Cheese, wrapped in a Newspaper containing his Advertisement. At the foot of the tree were more than a dozen Foxes who Professed Medicine.

"Pray let us hear your superb voice," chorused the latter. "Most willingly," responded the Crow; and he unwrapped the Cheese, which he carefully deposited upon another Limb of the Law, and threw down the Newspaper, which the Foxes at once devoured for the sake of the scent of the Cheese which still hung round It. This done, the Crow favored his auditors with the popular ballad: "It's naughty but it's nice!" and, after having flung some Brazilian pebbles into the crowd, he quietly enjoyed his Cheese.

Moral.—For a fracture of the Code, continued "extension" is bad, and the Newspaper splint worthless. The best dressing is *Cheese à la Brazilienne.*

ÆS OP(TIC).

Translation.

UNDER WHAT CONDITIONS CAN THE NASAL DOUCHE BE EMPLOYED WITHOUT DANGER?*

By Dr. Weber Liel.

(Lecturer on Otology at the University of Berlin.)

(Translated at the Author's request by F. C. Hotz.)

Gentlemen: You are aware that the first requirement in the treatment of affections of the naso-pharyngeal space is the frequent and gentle cleansing of the diseased mucous membrane. It is not only desirable, but almost always necessary that the medicaments be applied to parts which we cannot directly reach with instruments.

Theodore Weber's nasal douche seemed, in many respects, to accomplish this purpose; and aural surgeons everywhere employed it. The favorable results obtained with it, accounted for its growing popularity. Recently, however, many physicians have changed their opinion of the usefulness of this hitherto popular instrument, as a great number of cases were published, in which the use of the nasal douche was followed by violent aural inflammations, sometimes jeopardizing the life of the patient. These observations lead to the conclusion that the inflammation was caused by the entrance of some of the fluid which passed through the nose, into the Eustachian tube and tympanic cavity. Some, considering this accident unavoidable, discountenance the use of the nasal douche altogether; while other surgeons believe they

* A paper read before the Medico-Chirurgical Society of Berlin, Dec. 28, 1877.

can obviate the entrance of fluid into the middle ear by certain precautions and by modifications of the douche.

The fact is that all American, English and German surgeons who have written on this subject, only consider the possibility or impossibility of preventing fluid from entering the middle ear. *They entirely forget to ventilate the question whether the entrance of fluid into the middle ear always causes an inflammation.* I shall presently show that this is not the case, but that the occurrence or non-occurrence of otitis after the entrance of fluid into the middle ear is determined :

(*a.*) By the quality of the injected fluid.

(*b.*) By the state of the mucous membrane of the naso-pharyngeal space, Eustachian tube and tympanic cavity at the time when the douche is applied.

(*c.*) By the behavior of the patient during and directly after the douche.

But let me first say a few words in regard to the various methods of douching the naso-pharyngeal space.

I presume you all are familiar with Th. Weber's nasal douche and its application. It will, therefore, be sufficient for our purpose to draw your attention to the fact that its current of water is not uniform and continuous ; it is gradually growing weaker, because the column of water in the vessel is steadily decreasing, and it is often interrupted, because the hand holding the tube cannot be kept absolutely steady and immovable. For these reasons, we notice during the operation of the douche the contraction of the visible musculature of the palate is not uniform, but the velum and the posterior arches are in a trembling motion of constantly changing tension. But if it is the levator veli muscle which bars the introitus tubæ against the entrance of fluid as it flows by, we can conceive the possibility of its entering the tuba at the moments of decreased muscular tension. I have also shown, by experiments with the different kinds of nasal douches, that they cannot be used longer than half a minute without sneezing or swallowing. By these acts the mouth of the tuba is opened, and the fluid enters it, unless the douche be instantaneously discontinued. Still greater is the possibility that fluid will get into the middle ear if a Davison's syringe is employed for the

douche. The fluid is thrown into the nostrils by jets and the flow is very irregular and variable in force, and consequently the state of contraction of the muscles varies constantly. The danger is decidedly lessened by following Dr. Fraenkel's advice, which is, that one should begin to sound the German vowel u (oo in English) before the water is started, and continue the pronunciation of this vowel as long as the water is passing through the nostrils. During this phonation of u, the levator palati is very strongly contracted, and its belly is crowded against and into the ostium pharyngeum tubæ. But if the closure of the isthmus of the pharynx is overcome, as it might be at any time when the pressure of the water is suddenly increased by a stronger compression of the rubber bulb; if then deglutition becomes a necessity, it would require a great deal of practice and presence of mind of a patient, to stop the douche before he stopped sounding.

For many years I have been using the syringe for nasal douche. My naso-pharyngeal syringe is of glass, so that I can see whether its contents are free from impurities; it holds just enough water to fill the naso-pharyngeal cavity of an adult. Its bulbous nozzle is of hard rubber; the piston is of metal, and the piston rod ends in a ring for the thumb. The injections are made in the following manner: the head of the patient being held up as straight as possible and steadied by the physician's one hand, the nozzle of the syringe is inserted into that nostril which on a previous examination was found the less pervious; the fluid will thus find no difficulty in flowing off through the other nostril. If we watch the arches and velum of the palate during an injection into the nostril, we shall observe the posterior arches by a sudden contraction, approach each other, and the posterior wall of the pharynx; we shall further observe how, by an energetic reflex contraction of its musculature, the velum is drawn upwards, and its posterior edge laid firmly against the posterior pharyngeal wall. We shall not observe any tremulous movements or unequal variable tension of the parts, as a careful inspection detects when the other modes of the douche are employed. This powerful contraction of the levator palati beginning and ending with the injection, so thoroughly occludes

the mouth of the Eustachian tube, that no fluid can be forced into it. If the fluid is ejected from the syringe with less pressure, the reactionary contraction of the muscle is less strong accordingly, but still sufficient to keep the fluid out of the Eustachian tube. There is another advantage the injection with the syringe has over the nasal douche. With the syringe we are able to reach and cleanse thoroughly all parts of the naso-pharyngeal space, while experiments on dead bodies have convinced me that the fluid thrown into the nostrils with Weber's douche flows over the parts in the immediate vicinity of the posterior nares, but never reaches the roof of the naso-pharyngeal cavity. It is, however, not always allowed to execute the douche, in the described manner. In certain persons the fluid, though thrown into the nostrils with moderate force, enters the middle ear comparatively easily. We shall find in such cases that during the act of deglutition or phonation the soft palate is incompletely raised. During the douché, then, such persons can scarcely abstain from swallowing, because the water runs down behind the velum instead of returning through the other nostril. The rhinoscopic examination of some such persons has shown me that where the naso-pharyngeal space was insufficiently closed against the fauces, the ostium tubæ was imperfectly occluded by the contracted levator muscle. Children have a very short and wide Eustachian tube; and the fluid when injected even with very little force, often enters the middle ear, and therefore we have to be particularly cautious; although the experiment shows that in children the entrance of fluid into the middle ear is seldom followed by inflammation. On the other hand, there are numerous cases where the most forcible injection, or any other mode of douching, applied most improperly and carelessly, does not cause the entrance of fluid into the tuba. They are those cases in which the wall of the Eustachian tube is collapsed from inefficiency of its musculature, or its lumen narrowed by catarrhal swelling of its mucous membrane. This point can be ascertained by means of bougies and the air-bath, and is of great importance in deciding the question whether and how in a given case the nasal douche can be employed.

Speaking now of the conditions under which an inflammation

supervenes upon the entrance of fluid into the middle ear, I have first to state that all publications on this subject have overlooked one, and in my opinion the most essential point.

We must ask the question: Do *all* fluids exert so noxious an influence upon the middle ear that their entrance must result in a violent inflammation?

Gruber stated that after injections of medicated fluids into the middle ear, he often observed symptoms of irritation rather than inflammation. And further I beg to mention that in the "*Deutsche Klinik*," No. 3, 1866, and "*Monatsschrift für Ohrenheilkunde*," Nos. 4 and 6, 1870. I communicated the fact that different fluids caused different degrees of inflammation; that, for instance, injections of sulphate of copper or zinc were followed by violent otitis media, but never caused perforation of the membrana tympani, while silver nitrate or corrosive sublimate caused a violent otitis with rapid perforation of the drum head.

During the past year Dr. Acker, of Washington, D. C., and I made a series of experiments on animals to test the effect different medicines would have upon the middle ear if they get there by the way of the Eustachian tube.

The result of these experiments (which Dr. Acker described in his dissertation Ueber Injectionen in den Nasenrachenraum und in die Tube, Berlin, 1877,) was as follows: "If we injected with some force a colored fluid into one nostril of a rabbit, the other nostril being closed, we could always find, at the post mortem some of the fluid in the middle ear, but if the other nostril was *not* closed during the injection, the fluid returned in a stream through the nose, and the autopsy confirmed that no fluid had entered the tympanic cavity. Numerous experiments with warm solutions of salt in various dilutions showed that shortly after the entrance of salt water into the middle ear a violent inflammation was developed. The vessels of the promontory and membrana tympani were highly distended; the secretion was increased and contained large numbers of white blood cells. After some time perforation of the membrana tympani took place. In all the animals thus experimented upon, the membrana tympani was perforated, and in one rabbit the tympanic cavities and both external meatus were filled with a fibrino-

purulent exudation. Injections of weak solutions of nitrate of silver were also followed by purulent otitis media with perforation of the membrana tympani.

But the results were entirely different, if we used solutions of soda carbonate for injections. In no case it resulted in the perforation of the membrana tympani, although in some tympana the traces of a past inflammation could be positively discovered.

These results fully agree with the observations made in men. And I would draw your attention particularly to the fact *that salt water had been employed in all cases where dangerous otitis media supervened.* The use of the nasal douche in men, just as the injections of salt water in animals, caused otitis media acuta with perforation. On the other hand, the experiments with pure solutions of soda prove that this is a far less dangerous remedy for the middle ear. It is only through a combination of other noxious influences that strong solutions of soda may perhaps cause subacute inflammation in the tympanum; but I nave never observed such accidents after soda injections. By means of my tympanic catheter I am able to force the solution directly into the tympanic cavity. I have practiced this mode of treatment a number of years for different affections of the middle ear, and I can positively affirm that the introduction of soda solution into the tympanic cavity has not in a single case been followed by pain or inflammation. One might say it is uncertain whether, in this treatment, the medicine gets into the middle ear at all. This objection is easily met by the following experiment: The medicine being colored by a small addition of aniline red (which must be free from arsenic) the tympanic catheter is introduced through the silver Eustachian catheter into the tympanic cavity, and the fluid forced into the tympanic cavity by strong compressions of the air bag. After this proceedure the presence of the colored fluid behind the membrana tympani can easily be confirmed by the aniline color, which is especially marked at the anterior portion of the drumhead.*

* For the observation that a fluid colored with pure aniline can be injected in the above manner without fear and danger, I am indebted to one of my students, who, while practicing the use of the tympanic catheter one day, by mistake, filled it with a weak solution of aniline. The case caused me a great deal of anxiety, but it passed off without any reaction.

During the years that I have been using warm soda lotions for the nasal douche, I have not observed any unpleasant symptoms of inflammation after the douche, if the patients conducted themselves according to prescribed rules.

My suggestion, therefore, is to abandon the salt water and to try a weak solution of soda instead.*

I have no doubt but that the occurrence of otitis media after the use of the nasal douche depends as much on the state of the mucous membrane of the naso-pharyngeal space and the Eustachian tube as on the state of the tympanic cavity. Almost all aural surgeons will agree with me that injections into the naso-pharyngeal space may be made without danger in case of suppurative otitis with perforation of the membrana tympani. The fluid injected through the nostril passes through the aperture in the membrana tympani, and escapes through the external meatus; even when salt water had been used, I have never observed a reactive otitis media under such conditions, provided the patient had guarded himself against taking cold by plugging the external meatus.

On the other hand, the nasal douche becomes a serious matter if the mucous membranes are in a state of increased irritability or sub-acute inflammation, as, for instance, if a naso-pharyngeal catarrh is just developing. At such times the irritation caused by the nasal douche is certain to aggravate the inflammatory state of the mucous membrane, and the slightest cold will incite a violent inflammation of the middle ear; because the mucous membrane of the Eustachian tube and tympanic cavity readily participates in the inflammatory actions of the naso-pharyngeal space.

Once, while suffering from a cold in my head, I demonstrated on my own person, the use of the nasal douche. I am certain that no fluid entered the tympanic cavity—a fact easily decided by an expert, who, from daily experiments, is familiar with the sensations in the ear caused by the entrance of fluids, introduction of a bougie, etc.

Nor did I experience anything directly after the injection save a burning sensation in the region of the orifice of the right Eustachian

* The solution may be strong enough to give the fluid a decided alkaline taste, about five Grams to 100.

tube. Several hours later deglutition became unpleasant, and I felt an increased warmth and burning sensation in the middle ear. Violent throbbing in the ear supervened and the attempt to blow my nose caused a painful tension of the membrana tympani and the crackling of bubbles of mucous. By keeping the ear warm and plugged, I felt relieved, and all threatening symptoms disappeared, after a day's rest and quiet. But I am convinced, had I neglected these precautionary measures, the irritation would have developed into a violent otitis media, *although the fluid of the nasal douche had not entered the middle ear.*

The symptoms of acute otitis do not follow directly the use of the douche, but appear after an interval of from 4 to 10 hours, after other noxious influences have acted upon the patient. The douche itself simply increases the disposition of the mucous membrane to inflammatory action, so that the supervention of any irritation (as overheating, excitement, cold, etc.) suffices to excite the inflammation. In consideration of this *increased liability* to otistis media the patient should receive strict instruction regarding his behavior after the use of injections into the naso-pharyngeal space. Especially if the patient experiences the slightest feeling of discomfort in the ear immediately after the douche, he must be enjoined to plug and cover the ear, avoid all talking, rest, and above all, to remain at home.*

It has also been mentioned by other writers that the entrance of fluid into the middle ear depends materially on the patient's correct behavior during the use of the douche. He must not use it until he can breathe quietly: he must not speak or swallow, and if the desire for swallowing becomes uncontrolable, he must stop the douche at once. The head must be held perfectly straight, neither bent backwards nor inclined forwards, because in the latter position the injected fluid is likely to get in the frontal sinus. He must not blow his nose directly after the douche, lest in so doing the fluid and mucous which have been gathered at the entrance of the Eustachian tube, be forced on into the tympanic cavity. It is important also, as already mentioned

* A careful scrutiny of the published reports on otitis after nasal douche will reveal the fact that some patients were suffering from an attack of coryza at the time, and others exposed themselves carelessly to wind and weather immediately after use of the douche.

by me, to inject the water through the less pervious nostril, so that the return of the water through the other nostril is unimpeded. Fraenkel's suggestion to pronounce the vowel u during the douche is particularly applicable where a wide tuba and an insufficient contraction of the levator palati muscle favor the entrance of fluid into the tube.

But all these points are of less importance compared with the fact, proven by experience and experiments, that the *quality* of the fluid used in nasal douches is the principal agent which determines the occurrence or non-occurrence of otitis media. I am firmly convinced that my colleagues will have no more unpleasant experience with the nasal douche if they use warm solutions of pure carbonate of soda instead of salt water, and at the same time pay more attention to the observation of all the other precautions.

We take pleasure in reproducing, upon another page, the excellent letter of Dr. T. K. Cruse to the *N. Y. Medical Record*, (and published in that journal August 10, 1878) upon the subject of medical education in France. Our readers will bear witness to the fact that the editorial and many other pages of the CHICAGO MEDICAL JOURNAL AND EXAMINER have faithfully depicted to the profession the glaring vices of the American system of "educating" medical men, and of appointing them afterward to every manner of official position in colleges, hospitals and the service of cities and States. Dr. Cruse's letter from Paris is such an apt reminder of much that we have said, that we feel glad to publish it in full. In doing this we make an exception to the rule that has been maintained strictly thus far in the conduct of this journal, a rule which has led us to rely upon original work for presentation to our readers.

Correspondence.

MEDICAL MEN AND MATTERS AT VIENNA.

[FROM OUR FOREIGN CORRESPONDENT.]

During the past winter I have been accustomed to meet in the streets of Vienna, at the same hour of the day, and nearly at the same place, two old gentlemen walking arm in arm, one of them quite short of stature, very lame, and bent with years, having nothing very remarkable in his appearance, except that his great fur coat was of a finer quality than one sees generally worn by those who go on foot in the streets of this city.

Afterwards, when I went on Friday evenings to the meetings of the "Wiener Gesellschaft der Aertze," I found this little old man occupying what appeared to be a seat of honor at a table in the centre of the room. Asking a brother physician to give me the names of the men who were seated around this table, I was greatly surprised to learn that this diminutive little man was none other than the great Skoda.

Although he never took any part in the discussions of the society, he was always present, and seemed to be an attentive listener.

Those who claim to be able to recognize qualities of mind by the size and shape of the human skull, or by the general outlines of a man's countenance, would certainly find Prof. Skoda a profound puzzle, for his appearance is anything but intellectual.

What the future may develop in the advancement of physical diagnosis we are unable to surmise, but it is not too much to say that Prof. Skoda has given this branch of medicine an impetus far exceeding anything that has been accomplished by any other

person of this century, and that his name will live in all future time as one of the great lights of our profession.

He is now about 80 years of age. He resigned his professorship in 1871, retiring on his pension of $2,000 per year.

At this writing he is confined to the house by a more than usually severe attack of the gout, and fears are entertained that he will not long survive.

Prof. Bamberger, who succeeded Prof. Skoda, is about 45 years of age, wears his hair long, has a large, massive head, and looks not unlike the Henry Ward Beecher of twenty years ago. In the department of internal medicine he is perhaps the greatest man in Austria. His treatment is almost entirely expectant.

After listening to his lectures for some time, and hearing but little said of any therapeutical measures, I asked a German physician why Prof. Bamberger did not tell us something about treatment.

The reply was that physical diagnosis was his only forte; that if he encountered a case in the diagnosis of which there was doubt, his great fear was that the patient might before his death pass from under his observation, and that he might be unable to clear up the mystery by a post-mortem examination.

Prof. Duchek, although perhaps not so widely known as Prof. Bamberger, is far the better clinical teacher, and it is from him that one gets most of the practical hints in therapeutics that are to be obtained here.

In the general résumé that he gave at the end of the winter semester, of his plan of treatment, he began by laying down the following maxim:

"Give no medicines that will materially disturb the functions of life in your patient."

He said further that in the early years of his practice, he had used a wide range of remedies, and was ever ready to make trial of all the new and much-vaunted preparations that were brought forward, but having been almost invariably disappointed in their use, he had now settled down to the employment of about one dozen remedies, seldom giving any others.

Of these, the principal were quinia, digitalis, iodide and bromide of potassium, opiates, the salicylates, the acetate of

ammonia, the mineral acids, ipecac, castor oil, the saline cathartics, and *occasionally* calomel. He never uses either aconite or veratrum.

He believes that the influence that these last remedies exert to lessen the muscular force of the heart, as well as the blood pressure in the arteries and veins, is, in the vast majority of cases of febrile and inflammatory disease in which they are prescribed, absolutely *injurious*.

Among the many patients I have seen treated in the Allgemeine-Krankenhaus, I have never seen a single cantharides blister used.

The poultices that one sees everywhere and in all forms in Paris, are not used here, either in the medical or surgical wards. The " Umschläge " or wet compress takes its place.

I have seen a statement made by a physician before a medical society in America, to the effect that ergot was here generally given to women in labor just at the time or a little before the child is expelled. This statement is only true *now* as far as Prof. Späth's wards are concerned, while both Carl and Gustav Braun never give ergot *before* the expulsion of the fœtus, and never give it *afterwards* unless flooding occurs, that cold externally and pressure will not control.

In fact with Carl Braun no considerable time is lost in even waiting for the effects of ergot in cases of severe post partum hœmorrhage, but the intra-uterine injection of an astringent preparation of iron is resorted to at once.

Prof. Rokitansky,* who through his researches in pathological anatomy is perhaps the most widely known of all the men connected with this school, resigned his chair in 1875, and was succeeded by Prof. Heschl, formerly of Gratz. He presided during the winter for a month, at the meetings of the " Gesellschaft der Aerzte," and often took an active part in the discussion of subjects that came up before that body. Prof. Stricker read a paper one evening on the localization of the different faculties of the mind in different sections of the brain, and, during its debate, Prof. Rokitansky gave utterance to doctrines of a materialistic

*Readers of this journal will remember that our last issue contained the news of Prof. Rokitansky's death.—Ed.

character, that would seriously have jeopardized his standing as a scientific man, and more especially as a teacher, had they been enunciated by any one occupying his position, on the other side of the Atlantic. In brief, he said that to him, it was as reasonable to suppose that every human being was possessed of an infinite mumber of immortal souls, as to suppose that he had only one. Every separate cell that the brain contained might as well be considered a small soul, as to aggregate them into one mass, and construct out of the whole one great immortal part.

He believed that the immortal part of man was the same as the immortal part of a match. When you burn the latter, carbonic acid remains. After death our bodies undergo a slower form of combustion, and the carbonic acid that is the result of this process, never is or can be destroyed. Prof. Rokitansky is a man of large frame, with a noble, intellectually-shaped head, and is apparently in robust health.

All who hold professorships in this school have the privilege of resigning at the age of 70, and drawing their full pay, $2,000 per annum, for the remainder of their lives; and it is perhaps due to this fact that we no longer have him as a teacher.

Prof. Billroth came here from Zurich in 1867. Through his work on surgical pathology, he has achieved a world-wide fame; consequently students and physicians who resort to Vienna as a medical center, come with high hopes of what they will be able to learn from him as a teacher, but I have to see the first man who has not been disappointed in these expectations.

He is a good illustration of the error that is often committed in the selection of men to fill the chairs in the German medical schools.

Having achieved eminence by original investigation in some department of medical science, the inference is that he is qualified to teach the particular branch on which he has been able to write with such satisfaction to the profession at large; yet as a teacher, he proves, perhaps, an entire failure. The material at Prof. Billroth's command is almost unlimited; as an operator he is cool and skillful; at his clinic you can see (if his eight assistants do not shut off your view), some of the most difficult opera-

tions in surgery, yet after all is said and done, he gives little satisfaction as an instructor of students.

Prof. Stellwag, the author of the well-known work on diseases of the eye, is a fluent lecturer, and relates an anecdote in a manner that often "brings down" the house with roars of laughter.

Though so well-known as a writer, he occupies a position as an operator and practical man, second to that of Prof. Arlt. I am told that Prof. Stellwag never achieved any considerable reputation as a practical oculist, and but for his professorship and the revenue from the sale of his book, he would, in a financial point of view, be scarcely considered successful.

Prof. Hebra, the father of modern dermatology, is about sixty-five years of age, rather short in stature, heavily built, and a genuine type of the German character. His class is composed almost exclusively of German students, the foreigners who come here preferring the shorter courses on skin diseases given by Profs. Neumann and Kaposi.

Prof. Hebra, like many other great men, though possessing a large head, has not a very tender heart. I saw him one day scrape away with a sharp spoon, the third part of a poor fellow's nose who had lupus.

As no anæsthetic was given, the man yelled most vociferously. When the doctor had finished, he asked the patient what his occupation was, and being answered that he was a shoemaker, the Prof. remarked, that that was a pity, for a man with such a magnificent voice as his, should have either been a singing master or a jackass. Prof. Hebra, as the reader is perhaps aware, does not give arsenic or other supposed specific medicines in diseases of the skin.

It is safe to say that he does not give medicines of *any kind* to one patient in twenty whom he treats for cutaneous disease, but depends entirely upon local treatment.

During the summer course we have had a successful Cæsarean section performed by Prof. Carl Braun. The subject, upon whom it was done, is a diminutive little woman, who in her childhood had suffered from rachitis, and whose pelvis in its antero-posterior diameter only measured 2¼ inches.

She had been in the hospital and her case was under observa-

tion for six weeks before the expiration of the regular term of pregnancy.

The patient was carefully watched, and when the first premonitary symptoms of labor came on, she was anæsthetized, and the operation done in the following manner:

First the abdomen was laid open in the median line from near the symphysis pubis to within three inches of the ensiform cartilage. The womb was now opened, the child and after-birth removed, great care being taken that no blood or amniotic fluid passed into the cavity of the peritoneum. The child, a girl weighing 6¾ lbs. was delivered alive.

Despite the long incision in the walls of the uterus, as soon as this organ was freed of its contents it contracted down with such force that the hæmorrhage was inconsiderable. The large chain of an écraseur was now passed down as low on the womb as could be done without bringing it to bear upon the bladder or ureters, and finally tightened so as to compress completely all the blood-vessels of that organ. The entire fundus uteri was next amputated within an inch and a half of the border of the chain.

The écraseur was left upon the stump, and brought outside of the peritoneal cavity, and the abdominal walls closed around it after the manner of the extra-abdominal management of the pedicle in cases of ovariotomy, the écraseur acting as a clamp. Two days later the stump showed some signs of bleeding, and a Spencer Wells clamp was applied over the écraseur. Four days after the operation, the patient exhibited symptoms of a partial peritonitis, which continued with a slight fever for a week longer. Excepting this slight disturbance, the patient had no bad symptoms, and made a good recovery. This, I believe, is Prof. Braun's fourth operation, but his only successful one. The removal of the entire body of the womb in connection with this operation now constitutes the exclusive mode of proceeding in cases of this kind here in Vienna.

In fact all cases that have been otherwise managed during this century have died.

Dr. Marion Sims spent some time in Vienna during the past winter, the object of his visit being, as I am informed, to collect

material for a new forthcoming edition of his work on uterine surgery.

While here, the doctor was of course considerably lionized, and invited to perform gynæcological operations. Among these he did three for the removal of cancerous portions of the womb by a method called by the Germans the "*Trichterförmiche Excision*," which consists in cutting away with the scissors a funnel-shaped portion of the crevix uteri, extending, when necessary for the removal of the diseased tissue, into the body of the womb itself.

In fact, as done by Carl Braun, the procedure consists in removing the whole lower portion of the muscular tissue of the uterus, close upon the edge of the peritoneum.

Dr. Sims' patients operated upon here, all died of peritonitis within ten days of the operation. I remarked to the professor who related the facts to me, that I supposed that they selected desperate cases for Dr. Sims to operate upon. He replied that although the cases were bad ones, that did not alter the fact that they had died of the direct effects of the operation.

Dr. Bozeman spent two months here in 1876, and I find a pretty general impression among the gynæcologists of Vienna, that he is the more skilled operator of the two.

In the rivalry between these two eminent men, many here in Vienna think that Dr. Sims has carried off more than his legitimate share of the professional laurels.

American female physicians, whom we meet at every turn in Europe, have formerly been able to get private instruction in many special departments of medicine, from the docents and assistants here. This winter, unfortunately for them and for those who may come after them, we have had several of the Mary Walker type, who were not contented with any privileges short of those accorded to men, and urged their claims with such pertinacity, that the faculty were impelled to take action in the matter, which has resulted in excluding them entirely in future from everything except the lectures of Prof. Gustav Braun. His course is delivered to midwives (Hebammen), who are instructed in the management of natural labors, and emergencies that may arise before a physician can be summoned. His class this winter numbers about 70, and is mostly made up of peasant girls having

a fair rudimentary education. The term of instruction varies from six to nine months. Foreign female physicians can enter this class and receive instructions with them. From 10 to 15 deliveries occur in his wards every 24 hours. His class have an opportunity to *witness* all the obstetrical operations.

The course is a very good one, but does not include everything that a lady who aspires to an eminent position in her profession would want to learn. For the benefit of the many who are in the habit of coming here, let me say that this is absolutely *all* that they can secure in Vienna.

Among the sixty or seventy American medical students and physicians who have been here attending lectures during the past year, about fifteen have been homœopathists.

We have here also a homœopathic hospital, from which has been sent out to the world some of those stunning statistics comparing the old school results of treatment at the Allgemeinen Krankenhaus with that obtained at the former institution. I have visited this hospital, and think I can explain all the difference in mortality that the friends of this exclusivism in medicine claim for it over its more aged competitor.

First, their hospital is a new one with large airy wards, and only contains fifty beds. Portions of the Allgemeinen Krankenhaus were built nearly a century ago; many of its wards have low ceilings, and it contains 3,000 beds. Without going any further, this will account for all the difference in mortality that they claim.

Then, again, they have no man on the staff of the homœopathic hospital who has any wide reputation as a surgeon, while to Billroth is sent from all Western Europe the most desperate cases for surgical treatment; cases in fact that the ordinary man dare not handle, and as a result, of course, many of them die after his operations. Among these homœopathists is one ex-president and one ex-vice-president of the Massachusetts State Homœopathic Society.

None of them ever go to this homœopathic hospital for instruction. They are much better men than the average of their school that one meets at home, and as most of them have taken special courses in physical diagnoses (in which they are generally wonderfully deficient), they are going to be difficult men to encounter, for those who come in competition with them in the future.

There has been some sickness among them during the past winter, and as far as my knowledge extends, every one of them, with a single exception, employed an old school physician.

While in Rome this spring, the ex-vice-president was taken with a severe attack of cholera morbus. He called me at 4 o'clock a. m., and I found him bathed in a cold sweat with violent cramping of the muscles of the lower extremities and discharging immensely large stools of a rice water character.

After I had examined him I said: "Doctor, there are three of our traveling companions in the next room who are homœopathic physicians, and as I do not practice that branch of medicine, you had better call one of *them*."

He replied, "I care nothing about homœopathy *now;* I am going to die if I am not soon relieved; treat me as you would any one of your lay patients."

While selecting some instruments and other articles for a physicians' outfit in company with the ex-president, I bought a steel engraving of the medical faculty here, grouped together. I said, "Dr. C. are you not going to buy this picture also for your office?"

"Not I," he replied. "It would not look well for me to have my office decorated with the likenesses of a set of old school professors."

Yet this man will cross the Atlantic and spend months in receiving instruction from these very men whom he professes to disown, as soon as he turns his back on this city. "Consistency, thou art a jewel." W. S. CALDWELL.

VIENNA, Austria, July 15, 1878.

[*From our Foreign Correspondent.*]

No. I.

SURGERY IN MUNICH; PROF. NUSSBAUM; EXTIRPATION OF THYROID GLAND.

MUENCHEN, July 8, 1878.

Editors Chicago Medical Journal and Examiner:

Soon after my arrival in the city I called upon Prof. D. von Nussbaum to whom I had a letter of introduction. He received me

with the greatest courtesy and has improved every opportunity to make my visit a profitable one. He is now the most prominent and most influential member of the medical faculty. He is about 50 years of age, medium sized and has fine features, with an expression of superior intelligence. He is not what might be called an orator, but a good lecturer, using plain language without the many technical expressions so common among German teachers. He gives a surgical clinic every day from 8 to 9 a. m. in the general hospital. He is an enthusiastic admirer of antiseptic surgery. With the exception of Lister, antiseptic surgery owes him the greatest debt of gratitude for its general introduction all through the German empire. His operations, with their results border almost upon the miraculous. Last week I witnessed an operation for the extirpation of a large sarcomatous tumor, situated in the dorsal region between and about the centre of the scapulae. The patient was a man about 50 years of age. He had been operated upon three times before; for the first time about 15 years ago, and the last time five years ago, the tumor recurring at variable times in the cicatrix. The patient is anæmic and somewhat emaciated, but no glandular infection can be ascertained. The tumor is somewhat elongated from above downwards, with several knotty red elevations near its superior border. It is apparently intimately connected with the deep fascia but not with the bones. Chloroform was administered. The whole operation was performed under a large spray from two spray producers. The skin over the tumor was included by two elliptical incisions. As the tumor was found to be very vascular and numerous large vessels passing into its interior, the base was divided into at least 25 pedicles with the ordinary dressing forceps, and each successively ligated with catgut and cut with the scissors. Very little blood was lost during the whole operation. The operator placed great stress on the importance of preventing great loss of blood in the aged, as it was very liable to be followed by serious if not fatal prostration. In closing the wound it was found that the skin had retracted to such an extent that proceeding in the ordinary manner the tension would be too great and would prevent primary union, a result so much to be desired in this case. To relieve the tension of the wound he applied what

he terms the "Entspannungs-Naht." A large silver wire carrying needle is introduced about two inches from the margin through the whole thickness, and is brought out at about the same distance on the opposite side, carrying a stout silver wire; to the ends of the silver wire a disk of lead the size of a quarter is fastened. Three such sutures relieved the tension and rendered the accurate closure of the wound with catgut sutures possible.

A drainage tube was placed in the bottom of the wound and cut at both ends on a level with the surface. The wound was dressed according to Lister's directions, being covered by thin antiseptic silk, eight layers of moist antiseptic gauze, eight layers of dry gauze, with a layer of Mackintosh cloth between the last two layers; around the neck and lower part of chest the irregular spaces were filled with salicylic cotton, and the whole retained by a gauze roller. During his remarks, after the operation, the professor stated that he had repeatedly employed as many ligatures as in this case, and had never found them to cause suppuration or interfere with primary union. They do not act as foreign bodies, but are absorbed.

In speaking of the nature of the tumor he said he belonged to that class of pathologists who believe that benign tumors may after a great many years, assume a malignant type. To-day I was present at his eleventh operation for knock-knee, which consisted in sawing off the internal condyle of the femur subcutaneously, but as I wish not to weary your readers, I will reserve the report of this case for my next communication.

Very respectfully,

N. SENN.

No. II.

MUNICH, July 15, 1878.

Editors Medical Examiner and Journal:

In my last letter I promised to describe an operation for knock-knee performed by Prof. von Nussbaum July 7. The deformity depends essentially upon an excessive development of the internal condyle of the femur. The inner portion of the articular surface of the femur being lower than when the rela-

tions of the condyles are normal, the leg is turned outwards proportionate to the extent of abnormal projection of the internal condyle. This fact led Oxdorn to separate the internal condyle of the femur subcutaneously, sliding it upwards; in this manner correcting the deformity. The patient was a young man about 30 years of age. The deformity had made its appearance during his early youth. Only one side was affected. The abduction of the leg was so marked as to interfere seriously in locomotion. A small incision was made about eight centimeters above the joint, and over the inner margin of the rectus femoris muscle. A large tenotomy knife was now introduced beneath the skin along the inter-condyloid fossa to the inner margin of the tendon of the patella, and by dividing the soft parts down to the bone a tunnel was made for the saw. The saw used was Adam's, with a cutting edge two inches in length, blunt at the end, and a smooth shaft connecting it with a large firm handle. It was introduced along the tunnel in the same direction, and the bone divided from before backwards sufficiently until the bridge left could be fractured by forcible adduction of the leg; this took place with an audible snap, when the leg could be easily placed in its natural axis. It is important not to complete the section with the saw, as the artery beneath might be injured, but to complete the operation by forcible manipulation. The opening in the skin was accurately closed with catgut sutures. Very little hæmorrhage took place. A well-padded splint was applied along the outer side of the leg and thigh, retained by a roller. The whole operation was performed under the antiseptic spray, and the wound covered by an antiseptic dressing. Directions were given that passive motion should be made in a few days. Prof. von Nussbaum has performed this operation eleven times; in all the result was perfect, straight limb without anchylosis; in none did suppuration take place. When we consider the utter inefficiency of all methods of treatment previously recommended for the correction of this deformity in advanced cases, and at the same time may be confident of the harmlessness of the procedure, we gladly welcome this operation as one of the greatest triumphs of orthopedic surgery.

Extirpation of Thyroid Gland.

June 10, I received a private invitation to witness an operation for extirpation of a large goitre at his private hospital, located Nymphenburger strasse 28. The patient was Baroness X., about 50 years of age. She had been suffering from enlargement of the thyroid gland for many years. The suffering from the pressure of the tumor has gradually increased, until at present she is subject to frequent attacks of asphyxia. She is anxious to have the operation performed, even if attended with immediate risk to life, as it is the only means to afford possible relief. The tumor is quite firm, the size of a large fist, and located over the center of the trachea. Chloroform was administered by staff surgeon Bratsch. The head was thrown backwards by placing a pillow under the neck. An incision was made in the median line from the upper margin of the tumor to near the sternum; on the right side another incision was connected with this, and carried along the upper margin of the clavicle to the external jugular vein. The skin was separated from the tumor, and a number of small veins ligated with catgut. On the surface of the tumor large veins were seen, some the size of the little finger, running in all directions.

The tumor was separated from the structures around and beneath it by making small pedicles with the dressing forceps, drawing through the openings made with the forceps, catgut ligatures, and after tying them, cutting the intervening portion with the scissors. Notwithstanding the great care exercised to prevent hæmorrhage, it at times became alarming, from slipping of the ligatures on the surface of the tumor, and from division of vessels not included in the ligature. Several times the pulse became imperceptible, and respiration almost suspended, but the greatest difficulty met with was at the base of the tumor, where it was intimately connected with the larynx and trachea; the walls of the larynx and trachea had become extremely thin from the long continued pressure of the tumor, and in attempting to separate it the trachea was opened, blood immediately entered, and respiration ceased. An elastic catheter was introduced into the trachea, and the blood withdrawn by the mouth of the operator; artificial respiration made by compressing the thorax.

As soon as respiration became re-established, a double tracheotomy tube was introduced, and the operation completed. The operation lasted over an hour, and but for the presence of mind of the operator, and his great courage, as well as the skillful assistance rendered by such men as Bratsch, Lindpainter and Messer, the patient would certainly have died on the table. Forty-six catgut ligatures were used. After all hæmorrhage had ceased, the wounds were closed, and the trachea tube secured with a tape tied around the neck. As a dressing, borax lint was used. The patient rallied after application of a strong current of electricity; respiration became regular. She was placed in bed, and external heat applied. Nourishment was introduced by means of a stomach tube.

The patient died 24 hours after operation.

Yours truly,

N. SENN.

PROFESSIONAL ADVERTISEMENTS.

To the Chicago Medical Journal and Examiner:

The subject of personal advertising has recently been brought prominently to the notice of the profession. The methods, both direct and indirect, of accomplishing this are often observed, and, if carefully collated, would afford material for an interesting, possibly an instructive article. To arrange to be called out of a congregation; to drive in great haste, as if pressed with business, though perhaps sadly lacking patients; and in many other ways to convey the impression of being overwhelmed with professional work, and to appear as if possessed of a hidden reserve of knowledge and skill, have been practiced until the appliance of these devices almost takes the rank of an established art. Another method is to advertise through the columns of the secular press, or in handbills and circulars, that may be easily disseminated. In this practice a large class that the profession look upon as quacks, assume no disguise, but boldly proclaim their skill and acquirements. This method, however, is condemned by the rec-

ognized profession, and is prohibited by its code of ethics. But the ingenuity of man has always been able to devise means to evade the statutes, both of law and ethics. When the State of Maine made the selling of a glass of whisky to a thirsty sufferer a penal offense, places of business were immediately opened where a striped pig was exhibited for a consideration, and the delighted beholder went away gratuitously refreshed with an exhilarating draught. Druggists, who are conscious of the indelicacy of too directly advertising themselves, select some special article which they advertise with great diligence, the gist of the advertisement being like that of a lady's letter, in the postscript—for, at its close, the druggist's card holds a conspicuous place. There are suspicions that some members of the profession practice similar arts.

I may cite, as an example of what may justify these suspicions, the headings of certain certificates recently widely disseminated. These headings recite the names of the physicians who give the certificates, the professorships they hold in various colleges, the hospitals with which they are connected, the learned societies of which they are members, and in some cases even descend to the minutiæ of the street and number of their residence.

To these headings are attached certificates, recommending the use of certain mineral waters. This reproach rested on a number of well known physicians of the city of New York. The JOURNAL AND EXAMINER, animadverting on this occurrence at the time, said: "It is a satisfaction to us, that at no time have we had occasion to blush for any such flagrant violation of professional propriety in the West." But "let not him that girdeth on his harness boast himself as he that putteth it off." Close on the heels of this self-congratulation, the profession of Chicago has been made to feel the crimson in its cheek. An advertisement appears day after day in the most widely circulated papers of Chicago, signed by more than a dozen well-known physicians of the city, who have united in the Herculean task of informing a distressed and waiting public, of whom it may purchase a pair of spectacles. By a singular accident, most of these signers are the happy possessors of long titles; and these are carefully

embodied in the advertisement. It is Professor this, or Professor that, in this or that medical college; or an attendant in some hospital. A single name comes before the public in the nakedness of a simple M. D., and with its surroundings in the advertisement, it appears like one bald head amid a group, of which all others are adorned with a profusion of hyperian locks. Few can be so blind as not to see that such advertisements are as much in the interest of the "Professors" whose names are embraced in them, as of the innocent draught of mineral water, or bit of pebble glass recommended. This is not unlike the Arab cry of the street venders of small wares. "In the name of the Prophet—figs." In the name of the "Professors"—spectacles. Such arts lack even the merit of novelty. I presume the metrorrhagic woman of the Scriptures—"which had an issue of blood twelve years, and had suffered many things of many physicians, and had spent all she had, and was nothing better, but rather grew worse," had selected in succession her many medical attendants, from having seen their advertisements in the daily prints, and been in this manner informed that each of them had the degree of A. M., M. D. and L.L. D., and was Professor in the Oriental Medical College at Jerusalem; or held a position in some hospital there established. These oriental Professors might have denied that this was an individual advertisement of their attainments, and thus a violation of the code; but they were certainly conscious that only a dull patient would fail to reason that high position is presumptive evidence of superior skill. Possibly professional advertising is now practiced as successfully as ever before; but it is sadly lacking in that display of genius which once gave it almost an air of respectability. To make this apparent we quote from some advertisements of Martin Van Butchell, a physician who practiced in London more than a century since:

Here is a recommendation of the Balm of Life, published in the *World*, Saturday, August 30, 1791.

"He that doeth well, cometh to the light."

"Old People, (efpecially Profeffors of the healing art; and fuch of their friends, as are not fond of inteftine medicines) are refpectfully informed, that MARTIN VAN BUTCHELL. (of Mount-ftreet, Grofvenor-fquare), Surgeon-Dentift, and Patentee for Spring-Bands, has invented and (himfelf) prepared,

a neat, clean, pleafant-fmelling, outward SPECIFIC, for BLEEDING FUNGUS', INFLAMMATIONS, SUPPURATIONS, CARBUNCLES, ULCERATIONS, and MORTIFICATIONS!

"JOHN HUNTER, Esq. F. R. S. (of Leicefter-fquare), Surgeon-Extraordinary to the King, and Surgeon-general to his Majetfy's Forces, had a fmall bottle of it prefented to him very lately:—when he faw two Patients, and the faid SPECIFIC, moft readily applied (to their bad parts), with much fuccefs!

This—is not like any extract of Lead;—
(That palfy-producing,—noxious Metal:—)
Nor,—the King's-Evil Roufer—Mercury:—
(Dire,—predifpofing Caufe—of many Woes.—)
Nor,—Antimony;—often dangerous:—
(Nor,—the Cauftick,—Lapis Infernalis:—)
Nor,—that injurious poifon,—Arfenick:—
(Nor,—Hemlock; which, too long amus'd weak minds)
But,—ESSENCE from fine Gold;—
Sweet BALM of LIFE!
"The ROYAL COLLEGE of PHYSICIANS,
And the
Corporation of SURGEONS of London,
(Thofe proper GUARDIANS of infirm bodies,)

May fee—if they pleafe—fuch as Mr. JOHN HUNTER has with pleafure feen: on giving notice to

MARTIN VAN BUTCHELL,
"Who fends forth words of truth—and foberness."

☞ So many die—wanting the BALM of LIFE;
Aged folk—fhould ever have it by them!—
And fo ought the young:—as a PREVENTIVE,
Of what might end in—
Sad PUTRIDITY.——
Obferve,—
Strong Drinks—Make Weaknefs,—and are bad
For them that ufe
VAN BUTCHELL's Balm of Life!

The two following are designed to advertise the doctor rather than his medicines:

BY the GRACE of GOD.
WE—CURE—SAD—TOOTH—ACH:
In TWENTY minutes:—Without DRAWING It:
LIKEWISE, BAD RUPTURES:—VERY SPEEDILY:
With FIT Bandages:—THAT do NOT Torture.
MARTIN VAN-BUTCHELL:
SURGEON for the TEETH:—More than THIRTY Years,
"THEY—THAT—SEEK—SHALL—FIND."
TUMORS—ON—FACES:
Gums,—NECKS,—and ARMS of—THE faireft LADIES:

And FAIR Gentle-MEN:
STYS—UPON—EYE-LIDS:
PARALYTIC—Strokes:—WEAKNESSES—of—JOINTS:
BIG—VEINS—IN—MAN's—LEGS:
FUNDAMENTAL-ILLS:—PROLAPSUS-ANI:
WENS and CARBUNCLES:
SWELLINGS—near—the—GROIN:—FISTULÆ-and-PILES:
CURED—WITHOUT—CUTTING;
Or SCARIFYING.

MARTIN VAN-BUTCHELL, from his Anatomical—Chemical—Experimental—Mechanical—Medical—Philofophical—Practical—and Surgical Knowledge, is depended on, as the trueft friend to fober people, forely afflicted—with faid fad complaints.

EMPERORS,—Princes,—DUKES, and—MARQUISES.
THE Great JOHN HUNTER * Taught ME to GET first:
So we do much good:—Curing FISTULÆ.
Without Confinement, Fomentation, Rifk:
Injection, Poltice, Cauftic, or cutting.
FEE is Two per CENT.—On FIVE Years PROFIT:
☞All the money down:—Before I begin.
ANANIAS, FELL!—DEAD FOR KEEPING BACK!
MARTIN VAN-BUTCHELL.

* SURGEON EXTRAORDINARY TO THE KING:
And Surgeon General to HIS Forces.
THE—first MAGISTRATE
And other SINCERE—Lovers of this STATE
Are now informed—moft refpectfully
That fome years ago, MARTIN VAN BUTCHELL, had an Appointment to mee
(—At Lady HUNLOCH's Houfe, in Stratford-Place,—)
his able teacher, JOHN HUNTER, Efq.
Who overtook him in Grofvenor-fquare, and bade him get into his Chariot:
—foon as he was feated,
John, faid, "What Mifchief are you about now?"
Martin. 'Curing the King's-Evil.'
John. "I can't Cure the King's-Evil."
Martin. 'I know you can't Cure the King's Evil:—if you could Cure the 'King's-Evil, I fhould not trouble myfelf about the King's-Evil but I want 'to do,
'What you cannot do!'

John. "That is right.—Do you try to get firft. (—*We know nothing, com-'pared to what we are ignoront of*—) Make yourfelf of confequence, and then 'every body will make you of confequence; but if you don't make yourfelf 'of confequence, nobody elfe will.—I do affure you,—many are in very 'high efteem, and very full practice, that (—comparatively—) know no more 'about HEALING, than *Dray-Horfes*:—they have not POWERS.
"YOU—TRY—TO—BE—FIRST!"

These advertisements are classical, and make those of more recent origin seem "stale, flat and unprofitable." The study of Van Butchell may safely be commended to all who may be tempted to seek personal fame otherwise than by doing worthy work and communicating their observations to the profession through scientific channels.

It is not pleasant to feel obliged to criticise in this manner the acts of personal and professional friends, but the interests of the profession should always stand above personal considerations, and if our code is not to be maintained, we may as well disband all our organizations, and become, at once, professional guerrillas.

E. INGALS, M. D.

MILWAUKEE, August 20, 1878.

Editors Chicago Medical Journal and Examiner:

In the issue of your journal for November of last year, you took occasion to severely censure a number of prominent Eastern physicians for displaying their names and titles in advertisements of the Hunyadi Janos mineral waters. You justly denounced it as a violation of professional propriety which representative men certainly ought to be the most scrupulous in observing.

You concluded your criticism by saying: "It is a satisfaction to us that we at no time have had occasion to blush for any such flagrant violation of professional propriety in the West."

When I read this, I experienced the pride of being a Western physician. I imagined myself and my Western brethren standing on the high pedestal of professional integrity, from which we could look down upon the Eastern crowd toiling in the dust of newspaper notoriety.

But alas! My pedestal was built of perishable stuff, and erected on quicksand! To-day it lies on the ground, a heap of dust and imagination.

Scarcely six months had passed over the country, when physicians of the Western metropolis set an example of professional impropriety far more glaring and disgraceful than the public indorsement of a mineral water by our Eastern brethren.

I allude to the advertisement of an optician, which during the past month was published on the first page of the Chicago daily and Sunday papers, and paraded the names and titles of eighteen professors in the medical colleges of Chicago as indorsers.

The Eastern physicians can say at least that they recommended a *genuine* article, which really *is* that which it claims to be.

They could form their opinion at least from experience, and an intimate knowledge of the article they recommended.

But what about the article indorsed by eighteen Chicago medical professors? Did they inquire into the previous history of this case; did they ascertain whether he was a competent, honest-dealing optician, or an impostor? It would also be pleasing to know how these eighteen professors, among whom there is not a single ophthalmic surgeon, so suddenly obtained the ability to pass an opinion on spectacles and their proper adaptation, which they generally admit they know nothing about.

To a clear minded physician whose eye can penetrate through the gauzy garment of a "professor," to the true inwardness of the knowledge and ability of a man, these indorsers appear to have made themselves ridiculous because they did not know what they were talking about, and have disgraced their names and colleges if the recommended optician should sooner or later be unmasked as a shrewd unscrupulous pretender.

I was accustomed to look to the professors as the representative men of our profession, and believed them to be the corner stones of the code of ethics. I always thought they were unusually pedantic in their professional acts lest they might soil the purity of professional dignity; and exceedingly reluctant to have their names and titles appear in daily newspapers lest somebody might suspect them of a desire to advertise themselves. I, therefore, was greatly surprised by this exhibition of bad taste, ill judgment, and imprudence on the part of our professors.

Your most sorrowful brother,

OPTIC.

Reviews and Book Notices.

ETUDE EXPERIMENTALE ET COMPARÉE SUR L'ARSENIC ET L'HUILE DE FOIE DE MORUE DANS LE TRAITEMENT DE LA PHTHISIE PULMONAIRE. Par Joanny Rendu, Paris, G. Masson, 1878.

EXPERIMENTAL AND COMPARATIVE STUDY OF ARSENIC AND COD LIVER OIL IN PHTHISIS PULMONALIS. By Joanny Rendu.

This is a pamphlet of 48 octavo pages of text and ten plates, eight of which represent the curves of temperature, sweat, diarrhœa, muscular force and weights of the patients, and two the thermometric tracings. The study was made in the *Hôtel-dieu* at Lyons, in 1877, the special object being to determine the relative values of arsenic and cod liver oil in the second and third stages of phthisis. The following are the author's conclusions:

I. *Practical Conclusions.*—To determine which of the two remedies is preferable in the treatment of phthisis, he took thirty-five patients in the 2d and 3d stages, and placed them at hazard in three classes: 1st, those placed under simple tonic treatment, otherwise called the expectant treatment; 2d, those treated with arsenic, and 3d, those with cod-liver oil. These patients were, for the most part, followed for two and a half or three months.

Every ten days their *exact* weight was taken, and the amount of their *muscular force* by the dynamometer. Note was also made of the degree of *sweating* and *diarrhœa*, and each day, morning and evening, the *rectal temperature* was taken. For various reasons it became necessary during the observation, to omit ten of these cases to avoid possible error. The remaining

twenty-five cases were divided into three classes, eight in the first, eleven in the second, and six in the third.

Of the eight patients subjected to the expectant treatment, six lost in weight and two gained; of the eleven treated by arsenic, ten lost in weight and only one gained; of the six treated by cod liver oil, two lost in weight and four gained.

The degree of gain or loss by these three methods of treatment may be appreciated in the following manner, the duration of the experiments and the weight of the patients being supposed the same for the three classes, we find:

By the expectant plan a loss of 4 k. 965 g. for 100 k. of patient.

By the arsenic treatment a loss of 4 k. 703 g. for 100 k. of patient.

By cod liver oil treatment, a *gain* of 2 k. 150 g. for 100 k. of patient.

Or rather by adding to this last series, as it is legitimate to do, *what has not been lost*, to what has been gained, we find by the use of cod liver oil a *real increase of more than 7 kilograms for* 100 *k. of the patient.* Arsenic gave only the results of the simple expectant plan. On the contrary, the patients who took cod liver oil, alone gained in weight and strength. The pulmonary lesion did not appear to be as happily influenced by the cod live oil, as the general state and the nutrition of the patient. The medicine has little or no effect when the pulmonary lesion is considerable.

II. *Scientific Conclusions.*—The comparative study of the curves of sweating, diarrhœa, temperature, weight and muscular force of the patients, leads to the following results:

There is constantly an inverse relation between the weight and the temperature.

The same inverse relation exists between the weight on the one side and the sweating and diarrhœa on the other side.

The weight and muscular force are in direct relation. When here is neither fever, sweating nor diarrhœa, the weight increases progressively in relation with the treatment followed, but this increase is much more rapid if the patient be not a consumptive.

If the medium temperature remains in the neighborhood of 38° without being accompanied by sweating or diarrhœa, the patient

may still keep up and remain so for some time; in any case he loses but little.

The increase of weight begins about fifteen days after the temperature has come down to the normal level.

There exists an inverse relation between the temperature, on one side, and the sweating and diarrhœa on the other; one may have these complications combined two by two, but they are not seen all three at once. L. W. C.

A PRACTICAL TREATISE ON AURAL SURGERY. By H. Macnaughton Jones, M. D., M. Ch., F. R. C. S., I. and Edin. Philadelphia: Lindsay & Blakiston. 1878. Chicago: Jansen, McClurg & Co.

Every now and then small books are forced upon the medical profession under the alluring title of "Practical Treatises," which pretend to furnish, in the most condensed form, a complete résumé of our present knowledge in this or that branch of medical science. They are a sort of condensed milk; yet unlike the latter they cannot be made palatable and digestible by dilution, but must be taken in the crude and indigestible state in which they are presented.

The "Practical Treatise" before us is no exception to the rule, nor does it give us a high opinion of the author's literary talent. It is composed without system and written with haste, leaving some of the most modest demands unsatisfied.

The author's apology for publishing this book is that which we find in all these practical treatises, "intended chiefly for the busy practitioner and student," and from this stand-point we shall examine his fabrication.

We believe that in a small compendium, wood-cuts should be reduced to the smallest possible number of absolutely necessary illustrations. But to ornament 172 small octavo pages with forty-five pictures of such instruments as nasal specula, syphon douche, nasal douche, syringes, etc., is a pictorial extravagance not in keeping with the modest space left for the text.

One hundred pages are devoted to the modes of examining the ear and the description of instruments. In this part the author's remarks are clear and to the point; and only his hasty writing

could make him commit this gross blunder, on page 33, of letting the triangular light spot of the membrana tympani begin at the *short* process, instead of at the extremity of the long process or handle of the hammer.

Only seventy-two pages are reserved for the consideration of the maladies of the ear. The eminently *practical* use the author of this "practical" treatise, undertook to make of this limited space, is manifested by the fact that ten pages are devoted to the description of "Othæmatoma," while only two pages are allowed for "Polypi!" And the commonest and practically most important aural diseases, the catarrhal affections of the middle ear and Eustachian tube, are disposed of on *five pages* (!) when nine pages could be given up for a quotation from a paper on "Deaf-mutism" which was read by Dr. Turnbull before the International Congress.

Another curious illustration of the author's peculiar idea respecting a "practical" book, may here be mentioned. On page 79 we find these remarks: "When and how are we to incise the membrane and make an artificial opening into the tympanum? This is just one of those disputed points which I determined to avoid dwelling on in this work, intending it as I do for practitioners whose minds should not, if possible, be burthened about operations which they are not likely to be called on to perform, and the decision as to the propriety of which involves a more lengthened and varied experience than is likely to fall to the lot of most surgeons." A few pages further on, the author has already forgotten this determination to avoid burdening the minds of practitioners "about operations which they are not likely to perform," etc., etc., for he devotes *thirteen pages* to "Tenotomy of the tensor tympani," although he looks upon it as a questionable operation, and acknowledges his total ignorance about it with more candor than grammatical finish: "I wish to remark that this is an operation the utility of which I have myself no practical experience. I have hesitated to practice tenotomy until more definite results are obtained from its performance, and the cases in which it is indicated are more clearly defined."

In view of the fact that America has produced three excellent text books on aural surgery by Roosa, Turnbull and Burnett, it

is difficult to understand how a leading American publisher could be found who would reproduce an inferior work like the one before us; for there is no valid reason for its existence. If a practitioner is too busy, or a student too lazy, to read one of our good and complete text books on Otology, he should never meddle with aural diseases, nor consent to practice on such cases with the diffuse knowledge to be gained from the reading of these small, "dime novel" volumes styled "Practical Treatises." F. C. H.

THE ATLANTIC ISLANDS AS RESORTS OF HEALTH AND PLEASURE. By S. G. W. Benjamin, author of "Contemporary Art in Europe," etc. Illustrated. New York: Harper Bros., 1878. Chicago: Jansen, McClurg & Co.

This book is a very attractive narration of the author's recent visit to the following islands of the North Atlantic: The Bahamas, the Azores, the Channel Islands, the Magdalen Islands, Maderia, Teneriffe, Newfoundland, the Bermudas, Belle Isle-en-mer, Prince Edward's Island, Isles of Shoals, Cape Breton Island the Isle of Wight.

An appendix furnishes, in the language and style of a guide-book, copious information regarding the attractions of each island for both invalids and sportsmen, sanitary statistics, means for reaching these resorts, and the hotels and expenses of living.

The book is very liberally illustrated and tastefully finished, and will be an entertaining lecture to every one. In those who have visited the Atlantic isles it will revive pleasant reminiscences; and those who have never been there, will receive such vivid impressions that they will be inclined to believe they have made the journey in reality. F. C. H.

PERSONAL APPEARANCE AND THE CULTURE OF BEAUTY, WITH HINTS AS TO CHARACTER. By T. S. Sozinskey, M. D. Ph. D. Philadelphia; pp. 196. Price, $1.50.

The book is one which commends itself as a work on hygiene, offering as a reward for the fulfillment of each and every law, the attainment, so far as nature's outlines will permit, of personal beauty, the outlines even being often amenable to improvement and correction, as measured by the standard of beauty. The

author gives the standard type of beauty, male and female, and gives the geometrical rule of procedure (Fechner, Dürer), on which nature operates in producing symmetry of form, as illustrated in art by Apollo and Venus.

Beauty being an improvable heritage, the author gives various suggestions relative to the cultivation of the various features, the forehead, eyebrows, eyes, nose, cheeks, chin, lips, teeth, lines, wrinkles, complexion and hair, and concludes with some sensible remarks on dress. A novel instrument is introduced whose use is to modify the growing infant's nose, called a nose machine. By it the unduly low-bridged nose is lifted up; and various tilts are corrected. There will exist a prejudice on the part of mothers to this invention, as it destroys much of the poetry in the sleeping cherub faces, to see clothes-pins attached to the little noses. But such prejudices should be subdued inasmuch as, according to Lavater, "A nose physiologically good is of unspeakable weight in the balance of physiognomy." Some observations are given on the import of features, enabling the observer to gain some glimpse of character, none of which are new. The book is fairly worth reading. S. F. B.

UROLOGICAL DICTIONARY, containing an explanation of numerous technical terms; the qualitative and quantitative methods in urinary investigations; the chemical characters and microscopic appearances of the normal and abnormal elements of the urine and their clinical indications. By John King, M. D. With twenty-seven useful tables and thirty-nine wood-cuts. Cincinnati: Wilstach, Baldwin & Co. Chicago: Jansen, McClurg & Co.

The above book lays before us, in alphabetical order, almost all that is of any importance which has been written relative to the physiological and pathological peculiarities of the urine. Much credit is due to Dr. King for getting together the very latest methods devised to render urinalysis practical and available to the busy practitioner. We observe among other devices he has given due force to the specific gravity method of determining the quantity of urea, devised by Dr. Geo. B. Fowler, of New York;

and has inserted in the supplement the very simple method of determining approximately the quantity of albumen, suggested by Dr. Wm. Roberts, of Manchester, England. It is certainly the most complete treatise on urinalysis extant, and we are convinced that those who examine judiciously the various works published, in order to make a selection will not hesitate long in making their choice.

There is, however, one thing which disappointed us. The derivation of words is entirely ignored. In a dictionary so well compiled we think we had a right to expect the derivation of such words as pycnometer, pyoturia and the like. Although the advisability of using classical words to express modern ideas may be called in question, yet if we use them we want to know as much as possible about them, so as to associate them intimately with their respective ideas.

The appendix also contains valuable information in useful tabular forms. It consists of 266 pages, and the binding is strong and durable, such as a dictionary requires. R. T.

TRANSACTIONS OF THE MEDICAL ASSOCIATION OF GEORGIA. Twenty-ninth Annual Session. Atlanta, April 17, 18, 19, 1878.

This volume presents, in a nicely finished, thoroughly revised form, the scientific labors of the Georgia State Medical Society, and contains some highly interesting essays. Dr. LE HARDY, at great length, discusses the history, causes, nature, pathology and treatment of yellow fever, from his personal experience during the epidemic of 1876, in Savannah. His observations fortified his belief in the *local* origin of yellow fever. His propositions are: 1. That yellow fever can *originate* here under certain conditions of earth and air. 2. That the sanitary condition of the low lands surrounding the city *is the most important factor* in the production of our yellow fever. 3. That *importation* is not necessary for its production, and, therefore, the strictest quarantine of ships, vessels or railroad trains will not prevent its occurrence in this place. Quarantine should be abolished and for it should be substituted *modern scientific disinfection*, which, in a few hours, will remove all causes of infection from any ship.

Dr. A. W. CALHOUN, Atlanta, gives a report of one hundred and thirty operations for strabismus. One hundred and sixteen operations were for convergent squint, and only fourteen involved the external rectus muscle, constituting divergent squint. As to the sex, the patients were pretty equally divided, viz., sixty-eight females and sixty-two males. But it is a singular fact, that among the whole number of cases only three have occurred amongst the negroes, although they have been collected in the midst of the densest portion of the black population of the South.

A new uterine tent is offered by Dr. W. T. Goldsmith, Atlanta. It is the pith of the dried cornstalk. "You take a joint of the dried stalk, strip it of its cuticle, and compress the pith, slowly and firmly, between the thumb and index finger. * * * By continued pressure you easily reduce it to four or five times less its original size. You can compress it to any intermediate size; or it may be used without compression, to carry medicaments to the interior of the uterus. Because of its ready compression to any desired bulk, you have the tent entirely under your control. Slight compression will give you moderate dilating power. Compress it as much as possible and you can get a dilating power equal to the sea-tangle or sponge. You may compress the pith first, and afterward, with a sharp knife, trim to the desired length and size; or you may first cut the pith to the size you wish it to dilate, and then compress it for easy introduction. * * The pith absorbs fluids readily, and when compressed, expands by such absorption to its original size." A few typical cases are reported, to illustrate the use and advantages of this new tent.

Dr. WILLIAM A. LOVE briefly alludes to the diagnostic value of the appearance of the hard and soft palate in intestinal diseases. "In all that class of diseases in which the general condition of the system demands the use of remedies known as *cholagogues* * * * experience has taught me that I risk nothing in saying that the muco-periosteal membrane in the roof of the mouth, will, by its yellow tinge, invariably indicate the necessity for their administration. *Per contra*, I may say, with equal confidence, that the absence of this yellowness indicates, with equal certainty, that such a class of remedies has been sufficiently used, or is not needed." The writer also alludes to the fact that in the exanthe-

matous fevers, the eruption appears in the roof of the mouth from twelve to twenty-four hours earlier than on the cutaneous surface.

F. C. H.

FOWNES' MANUAL OF CHEMISTRY, THEORETICAL AND PRACTICAL. Revised and corrected by Henry Watts, B. A., F. R. S., editor of the *Journal of the Chemical Society;* author of a Dictionary of Chemistry, etc. A new American edition, from the twelfth English edition. Edited by Robert Bridges, M. D., Professor of Chemistry in the Philadelphia College of Pharmacy. With one hundred and seventy-seven illustrations. Cloth, pp. 1027. Philadelphia: H. C. Lea. Chicago: Jansen, McClurg & Co.

This standard classical work on chemistry needs no recommendation to those who are acquainted with the literature of chemistry. It has, as the twelfth edition will testify, for years been a text book of great value, and the energy displayed by the editors in keeping it abreast of the times will enable it to retain the position in chemical literature which its merits have secured.

The changes introduced are mostly in the organic department, special attention being paid to the study of Isomerism, making the addition quite important.

R. T.

BOOKS AND PAMPHLETS RECEIVED.

Urological Dictionary, Containing an Explanation of Numerous Technical Terms; the Qualitative and Quantitative Methods Employed in Urinary Investigation: the Chemical Characters and Microscopical Appearances of the Normal and Abnormal Elements of the Urine and their Clinical Indications. By J. King, M. D., with twenty-seven useful tables and thirty-nine wood-cuts; pp. 226; leather. Cincinnati: Wilstach, Baldwin & Co.; 1878. Chicago: Jansen, McClurg & Co.

On the Therapeutical Forces: An Effort to Consider the Action of Medicine in the Light of the Modern Doctrine of the Conservation of Force By Thomas J. Mays, M. D., member of the Luzerne County Medical So-

ciety, etc., etc. Cloth; pp. 143. Price, $1.20. Philadelphia: Lindsay & Blackiston; 1878. Chicago: Jansen, McClurg & Co.

Anatomy, Descriptive and Surgical: By Henry Gray, F. R. S., etc., etc. With 522 engravings on wood. The drawings by H. V. Carter, M. D., and D. Westmacott. The Dissections jointly by the author and D. Carter. With an Introduction on General Anatomy and Development. By T. Holmes, M. A., Cantab., Surgeon to St. George's Hospital, etc., etc. A new American, from the eighth and enlarged English edition. To which is added Landmarks, Medical and Surgical, by Luther Holden, F. R. C. S., etc. Leather; pp. 983. Price, $7.50. Philadelphia: Lindsay & Blackiston; Chicago: Jansen, McClurg & Co.

Transactions of the Medical and Chirurgical Faculty of the State of Maryland; 80th Annual Session, held at Baltimore, Md., April, 1878.

The Soft Palate; Its Value in Diagnosis as Compared with the Tongue in Derangements of the Liver, Malarial Diseases and Exanthematous Diseases. By William Abram Love, M. D., Professor of Physiology in the Atlantic Medical College, etc., etc. Reprint from the Transactions of the Medical Association of Georgia, 1878.

Medico-Legal Evidence, Relating to the Detection of Human Blood, Presenting the Alterations Characteristic of Malarial Fever, on the Clothing of a Man Accused of the Murder of Narcisse Avrieux, December 27 1876.

Cholocystotomy for the Removal of Gall Stones in Dropsy of the Gall Bladder. By J. Marion Sims, M. D. Reprint from *British Medical Journal*, June 8, 1878.

Report on the Health of Children in the Oneida Community. By T. R Noyes, M. D., Oneida, New York.

Minutes of the State Medical Society of Arkansas, at its Third Annual Session. Little Rock, Arkansas.

Post Nasal Catarrh. By W. Porter, M. D., St. Louis, Mo. Reprint from Illinois *Medical Recorder*, Vandalia, Ill.

Tubercular Laryngitis: By W. Porter, M. D., St. Louis, Mo. Reprinted from the Transactions of the Missouri State Medical Association, 1878.

Fibrous Tumors of the Uterus: By W. H. Byford, M. D., Professor of Obstetrics and Diseases of Women and Children in the Chicago Medical College. One of a Series of American Clinical Lectures, edited by E. C. Seguin, M. D. New York: G. P. Putnam & Sons, 182 Fifth av.

Second Annual Report of the State Board of Health of the State of Wisconsin, for the year ending December 31, 1877.

Transactions of the Iowa State Medical Society, 1877-8, Vol. III.

Summary.

Collaborators:
Dr. H. Gradle, Dr. L. W. Case, Dr. R. Park,
Dr. R. Tilley, Dr. D. R. Brower.

Physiology.

Experimental Investigations on the Variations of the Volume of the Cranium, and on the Application of the Graphic Method to Solve the different Anthropological Problems.—M. Le Bon. (*La France Médicale*, July 17, 1878.)

M. B. presented to *L'Académie des Sciences* the following conclusions which are based on a considerable number of measurements, both of living subjects and from the specimens in the Museum of Anthropology, as well as from unpublished documents. The results are exhibited in graphic form at the Exposition. The conclusions are as follows:

1. The development of intelligence bears an intimate relation with the form, structure and volume of the brain. The volume is one of the most important of these factors. In measuring a series of skulls, taking a good average number to form the series, it invariably holds good that the most voluminous brain belongs, in the human species, to the races the most gifted intellectually; and in each race to the most intelligent individual.

2. In confining the attention, as is generally done, to the mean of all the skulls of each race and by comparing these means, there appears to be very little difference between one race and another. But if with the measurements arranged according

to their increasing volume, certain curved lines are drawn exhibiting how many subjects there are in a given race possessing a brain of given volume, it is readily seen that that which constitutes the superiority of one race over another is the fact that the superior race contains many more large skulls than the inferior race. In a hundred modern Parisian skulls there are about eleven subjects the volume of whose skulls would range between 1,700 and 1,900 cubic centimeters, whilst among the same number of negroes not one is found with a capacity equal to those indicated above.

The weight of 100 brains of modern Parisians of the masculine sex has shown that their weight varies from 1,000 to 1,700 grams. The cubic measure of an equal number of skulls has demonstrated that the measure of an individual skull varies from 1,300 to 1,900 cubic centimeters. These extremes approach each other by gradual progression.

4. The remarkable difference which has just been indicated in the weight of the brain and size of skull of different individuals of the same race, varies remarkably when we compare one race with another. The difference is greater in proportion as the race is more advanced in the scale of civilization. It has been established that the difference between the volume of the largest adult masculine skulls and the smaller skulls among the following races are :

Difference of size of the Gorrilla skull.....	148	C. C.
Difference of size of the Negro skull	204	"
Difference of size of the Ancient Egyptian	353	"
Difference of size of the Parisian of XVII century	472	"
Difference of size of the modern Parisian	593	"

The difference in size between the greatest and smallest skulls of modern Parisians is three times as great as the same difference among the negroes. The difference is greater among the modern Parisians than among their ancestors of 600 years ago.

5. The height (*taille*) has a certain amount of influence over the size of the brain, but the influence is very small. In grouping individuals of the same height (*taille*) and taking the mean weight of the brain of each group, it is perceived that between the mean weight of the brain of the group of individuals of the

greatest height and the mean weight of the brain of the individuals of the smallest height, the difference is scarcely 100 grams, whilst the difference often amounts to 300 grams among individuals of the same height.

6. Similar height being compared, the female has a brain much lighter than the male. On taking the mean weight of 17 brains of the masculine sex, the height being from 159 to 160 centimeters and comparing them with the brains of 17 of the female sex, the difference was found to be 172 grams in favor of the males.

7. The difference existing between the weight of the brain and consequently the volume of the skull in man and woman increases constantly in proportion as the race advances in the scale of civilization; so that looking at the mass of the brain and consequently the intelligence, the difference which was previously stated as existing is still increasing. For instance, the difference which exists now between the mean size of the skulls of the men of Paris and the women of Paris, is almost double that which exists between the skulls of the male and female inhabitants of Egypt.

8. Certain persons, having skulls measuring the same circumference, may present a difference of height of skull amounting to 200 C. C. in volume. That is easily comprehended when we remember the different factors, especially the height of skull, which must be taken into consideration in order to estimate the volume. But in measuring a whole series it is soon demonstrated that an increase of one centimeter in circumference of the skull corresponds to an increase of volume oscillating about 100 C. C.

9. The circumference of the skull, on which depends, as has just been seen, the volume of the brain, bears an intimate relation with the intelligence.

10. A comparative study of the various curves of the circumference of the skull, and of the curves of the head, and of the volume and weight of the brain, has shown the relation existing between these different values. A head, with a circumference of 57 centimeters, corresponds to a skull of 52 centimeters, and to a volume of 1,550 C. C. The probable weight of the brain in the skull will be 1,250 grams.

11. There is a constant inequality of development between the two halves of the skull which is sometimes more developed on the left, sometimes on the right side. Neither the race nor the intelligence seems to have any perceptible influence on this unequal development.

Practical Medicine.

Etiology of Tuberculosis.—Discussion at Fiftieth Congress of German Naturalists in Munich. Session of 21st September, 1877. (*Allgem. med. Centralzeitung*, Nos. 38–45, 1878.)

Prof. v. Buhl made some introductory remarks on the lymph-vessels of the pulmonary parenchyma. Siborsky had previously injected a solution of carmine into the lungs of a living rabbit, and found after death an injected network with stellate openings in the alveolar wall. A repetition of that experiment by Buhl's assistant, Dr. Schweninger, did not succeed. But a better mode of demonstrating the openings of the lymph-vessels consisted in filling a human lung (after death) with a colored fluid. On injecting a fluid containing cinnabar in suspension into the lungs of a living dog, and killing the dog at once by ligating the trachea, the cinnabar passes completely into the lymph-vessels and none remains in the alveoli.

Microscopical examination of such lungs shows conclusively that the lymph-vessels open into the alveoli. These openings are evidently dilated during inspiration, facilitating the entrance of any alveolar contents, solid or fluid, while the compression of these apertures during expiration prevents the expulsion of any particles.

In Dr. Buhl's institute, Dr. Lippl experimented on the direct inoculability of phthisis. As subjects he chose dogs, on account of their relative immunity from that disease. Drying and pulverizing some tuberculous sputa, he caused this dust to be inhaled by a dog through an opening in the trachea. This was repeated on three days; the animal died the twelfth day. The autopsy revealed numerous white miliary nodules in the lungs, on the pleura

and peritoneum, but they were not tuberculous, consisting simply of fat molecules and fat drops. But a decided miliary tuberculosis of the lungs was obtained by introducing into the lungs 30 to 50 C. C. of an emulsion of sputa with a 1 per cent. solution of salt. On repeating the inhalation two to four times and keeping the dogs alive for about two months, a success was obtained in every case.

Further experiments were reported by Dr. Tappeiner. He placed three healthy dogs into large, airy kennels. Taking a spoonful of fresh tuberculous sputa, he made an emulsion of it with 900 gr. of a 1 per cent. solution of Na Cl. This fluid was put into a steam atomizer in the kennels for one to two hours daily. The dogs remained apparently healthy, but on killing them after four weeks, a true disseminated miliary tuberculosis was found. Two other dogs receiving daily two spoonsful of the same sputa in their food, presented likewise a genuine miliary tuberculosis after six weeks, without having shown any symptoms during life. The innoculability through pulmonary and intestinal absorption was thus positively proven in animals noted for their immunity from spontaneous phthisis.

Dr. Schweninger, who had made the microscopical examination in the above cases, hereupon demonstrated the specimens, proving satisfactorily their tuberculous nature.

Speaking about the identity of human and animal tuberculosis, Prof. Bollinger criticised it as a mistake to employ rabbits and guinea-pigs for inoculation, since these amimals easily acquire tubercular affections from the most various (non-specific) causes.

On the other hand, having injected caseous masses from a tuberculous tongue of a cow into the peritoneal cavity of a goat, he found that animal presenting a genuine miliary tuberculosis of the peritoneum after the lapse of six weeks. Prof. B. further discussed the relation of phthisis to scrofula. By inoculating a goat in the peritoneum with some scrofulous gland-matter removed from the axilla of a man, an exquisite miliary tuberculosis of the peritoneum was obtained. Subsequent examination revealed an initial pulmonary infiltration in that human patient. On the other hand, the feeding with true tuberculous matter will

produce in some animals a scrofulous bowel affection, bearing a complete resemblance to the tabes meseraica of cattle.

Prof. Ponfick attempted to follow the mode of propagation of the tubercular virus, by examining the thoracic duct in all autopsies. In all cases of a strictly localized tuberculosis, the duct was found intact. But in the majority of instances of disseminated tubercles there was found a multiple eruption of miliary or aggregated tubercular nodules in the internal coat of the thoracic duct. This appearance is a manifestation of the passage of an impure irritating lymph; the impurities, however, we know only by their effects.

Omitting the purely critical part of Prof. Kleb's remarks, we will mention only his new results and views. In order to determine whether the contagious agent was the cells, of which the tubercle consists, or some other multiplying virus, he made some experiments in cultivating and isolating the virus. Placing some tuberculous matter in pure albumen of the egg, protected from dust, he found the latter soon cloudy from the presence of numerous exceedingly small molecules and short rods. On placing a drop of this mixture into successive portions of fresh albumen, the original substance of the tubercle was soon virtually removed by the increasing dilution; the molecules, however, continued to multiply.

Albumen thus inoculated, can produce true tubercles when introduced into the body of a healthy animal. On the other hand these fine molecules, if really the bearer of the virus, ought to be found in all tubercles, and Klebs did actually succeed in finding them. In all tubercles he examined he observed an immense number of molecules of barely visible dimensions, measuring 0.2, 0.5 micromillimeters. They were in constant movement, which movement was proven to be of vital origin by its cessation in high temperatures. The molecules were seen most abundantly in cases of acute disease in parts in which discrete tubercles were not yet found.

In the mesentery of a cat inoculated with albumen containing tubercular virus, the tubercles were found distributed along the course of the vessels. They consisted of proliferated endothelial cells, and contained but few white corpuscles. Emigration of

leucocytes is only an accidental occurrence in the development of tubercle. Between the endothelial cells the molecules previously described were found. But in and around the walls of vessels—at spots where no tubercles existed as yet, these same molecules were found likewise in accumulations. Prof. Klebs does not hesitate to call these corpuscles the bearers of the tuberclar virus, and to consider such accumulations along the vessels as the starting point of tubercles.

COLLODION IN SEA-SICKESS. Dr. Laederich. (*L'Année Médicale*, June, 1878, p. 101.)

The author has seen many cases in which sea-sickness has been prevented by the use of collodion as described below. He gives two striking cases in which the patients, who had previously suffered from sea-sickness every time they had crossed the ocean, were entirely prevented from it by the collodion.

The author's mode of using the collodion is as follows:

Before embarking, the traveler applies successively three coats of ricinated collodion with a brush over the epigastric region, not extending beyond the anatomical limits, which he indicates thus to persons consulting him: a horizontal line just above the umbilicus, to the right and left two vertical lines situated 5 centimeters outside of verticals, let fall from the nipples; finally, above, a line parallel with the costal borders, and 3 or 4 centimeters above these. When the journey is to be of several days' duration, he recommends the traveler to take a supply of collodion with him to repair the cracks sometimes produced in the coating.

The author has no proofs of this method being curative of cases already begun, but believes it would be so. He does not pretend to explain the action of collodion in these cases. He only knows that it is a powerful anti-emetic when thus applied, and has employed it in other cases, such as traumatic peritonitis, in which frequent and painful vomiting has been either entirely arrested or very much relieved, and the patients very much comforted. For this reason, he thinks it might be curative of sea-sickness as well as preventive.

BRYONIA AND DRASERA IN THE TREATMENT OF WHOOPING-COUGH.—Dr. Louvet-Lamare. (*L'Année Médicale*, June, 1878, p. 105.)

The author gives in the first or catarrhal stage of the disease a daily dose of 1 gram of the tincture of bryonia to a child of seven years. The medicine does not abridge this stage, but it very sensibly diminishes the tracheo-bronchitis, which is then the only morbid manifestation; moreover, being bitter, it stimulates the appetite, and does not occasion nausea.

When the characteristic cough occurs, he gives the tincture of drasera in daily doses of 1 gram for a child of seven years, and the frequence and violence of the coughing fits at once diminish. The value of this treatment has been proved in a large number of cases, and also in the fits of coughing, in certain cases of bronchitis, and even in phthisis, though not so marked as in pertussis. But little success has been obtained from it in coughs caused by laryngitis and laryngo-trachitis.

The dose may be increased by 5 drops or more every second day without danger, as it is not poisonous. The cough diminishes still more, but usually lasts for two or three weeks before convalescence. If, on the contrary it be given to a child who has had the cough for three weeks or so, one may expect to *cure the worst cases in a few days*. From a large number of cases thus treated, the author concludes that the disease may be shortened to at least one half the time required by change of air, which is often impossible.

TAPPING A VOMICA IN PHTHISIS.—Williams.—(*Br. Med. Jour.*, July 20, 1878.)

A patient aged twenty-eight, had had consumptive disease for six years. A large cavity with pleuritic adhesions had formed at the base of the left lung, besides others in other parts. The cough was harrassing, the expectoration very profuse (nearly a litre every 24 hours), and very offensive. Microscopical examination showed that lung degeneration was rapidly advancing. At the writer's request, Mr. Erichsen introduced a large-sized trocar and cannula between the seventh and eighth ribs, and withdrew a litre of fœtid pus; the operation being somewhat difficult on ac-

count of the toughness of the fibrotic lung. Relief was immediate, all fœtor ceased, both pulse and temperature fell, and the expectoration was reduced to 60-100 C.C. Limited pneumothorax and cutaneous emphysema followed, the latter soon subsiding. Even at the expiration of a month, the discharge was slight. The cavity had several times been washed out with antiseptic fluids.

The operation had previously been done in this country by Dr. Pepper, in England by Dr. Ramadge, in Germany by Dr. Mosler, and by others. The practice is only suited to exceptional cases, such as those of fœtid expectoration. It has been recommended to accomplish the same purpose by catheterisation of the air-passages, by large thoracentesis, by aspiration, by caustic and by galvano-caustic, the latter preferred by Koch of Berlin.

SURGERY.

SURGICAL VENOUS THROMBOSIS. M. Azam. (*Le Progrès Médical*, July 13, 1878, p. 543.)

The author read a paper to the *Société de Chirurgie* of which the following are the conclusions:

1st. Venous thrombosis of surgical origin is possible after fractures, contusions, phlebitis, varices, chronic inflammations in the neighborhood of large veins, and by the pressure upon the veins of rapidly developed tumors.

2nd. Venous thrombosis suspected by œdema of the parts situated below, is confirmed by direct exploration by the fingers along the course of the efferent veins.

3rd. The escape of migratory clots may be provoked by the movements of the patient, by extended exploration of the thrombotic veins, by massage of the limbs affected, or by the sudden suppression of the compression of a thrombotic vein.

4th. The accidents which are provoked by migratory clots are of various orders; according to their size they are, malaise, pleurisies with limited effusion, partial pneumonias, spitting of blood, syncopies, asphyxia and sudden death.

5th. The surgeon may prevent the formation of venous clots by avoiding as much as possible compression of all the large veins, and by having the greatest regard for their internal membranes, in hastening the cure of neighboring, chronic or deep inflammations.

6th. If the thrombosis is confirmed, he should avoid the separation of the clots by opposing as far as possible local and general movements, and in emptying by successive punctures the collections of liquids in the vicinity of thrombotic veins.

M. Verneuil asked M. Azam to add sudden pyemia to his list of disasters from nervous thrombosis. He has seen some striking examples.

M. Tillaux remarked that certain emboli, the result of venous thrombosis, are arrested in the right heart, causing death by syncope. He has seen in a case of thrombosis of the femoral vein, sudden death caused by a clot lodged in the columns of the right ventricle.

COMPLETE RESECTION OF THE WRIST: CONSERVATION OF THE MOVEMENTS OF THE FINGERS AND HAND. M. Reverdin. (*Le Progrès Médical*, July 13, 1878, p. 543.)

The author performed the operation upon a man of 41 years, in whom the member was compromised by a suppuratlve arthritis consecutive to a contused wound of the thumb. The operation was done after Lister's method, April 12th, 1877. M. Reverdin attacked the articulation by a simple dorsal incision in the neighborhood of the external border of the wrist; the necrosed bones of the wrist, the inferior extremities of the radius and ulna were extracted without much difficulty. The specimens were shown to the society. But one accident occurred—secondary hæmorrhage of the radial, after eight days, and M. Reverdin was obliged to tie both ends of the artery. Except this complication, the course was very simple.

To-day the patient has recovered the freedom of motion in the wrist; there is no loss of force in the muscles of the forearm. The three last fingers only present an incomplete mobility. However, the patient is able to use his hand for writing, and for some small carpentry work.

M. Reverdin, however, is not perfectly satisfied with the operative procedure. In order not to cut the extensor tendons, he had to draw them away forcibly. Perhaps it would be more simple, he adds, to cut one or more extensor tendons, because they remain too long after the operation, the regeneration of the bones always being incomplete.

CHOLECYSTOTOMY.—Sims.—(*Br. Med. Jour.*, June 8, 1878.)

A long account of a very interesting case which lead to the above operation, the first of its kind, is given by Dr. Marion Sims. It occurred in the person of an American lady residing in Paris. Without giving the details we will only say that it was a case of obstruction of the duct with dropsy of the gall-bladder from gall stone. Considerable fluid had been removed by aspiration and there was no doubt as to the diagnosis of the cystic trouble. She had been seen by the most celebrated French physicians, who were able to offer no relief. The symptoms were most acute and death was imminent when Dr. Sims proposed and executed the following plan of operation: An incision, three inches long, parallel with the linea alba, and three inches to the right of the umbilicus, was made over the most prominent part of the tumor and down to the peritoneum. The whole operation was made under the antiseptic spray, and with all the usual precautions. After hæmorrhage had ceased and the peritoneum been opened, a trocar was thrust into the tumor caused by the distended gall-bladder and nearly 1,000 C. C. of dark brown fluid withdrawn. When the cyst was emptied it was hooked up with a tenaculum to the edge of the incision and drawn out with the fingers. It was then incised with scissors for about two inches, and thoroughly cleansed out with sponge porbangs; along with more viscid fluid, several gall stones were thus removed. Having thus swabbed out the gall-bladder, its open border was secured to the upper angle of the abdominal incision so as to secure a fistulous outlet. A projecting portion was amputated. After waiting for all hæmorrhage to cease, the abdominal wound was closed.

The patient's condition remained satisfactory for some days, but on the ninth day she sank, and died vomiting blood, and with hæmorrhage from mouth and nasal cavity.

Post-mortem inspection showed the abdominal wound everywhere healed, and no evidences of peritonitis. The gall-bladder was greatly thickened, and contained sixteen sacculated gall-stones. Death had been caused by hæmorrhage from the mouth and stomach, which had resisted all treatment and was probably due to changes in the blood.

So much for the conception and execution of a new operation by an American surgeon, to which he has given the most appropriate name as above. With aspiration as a means of diagnosis and antisepticism as a means of safety, there seems no reason why it should not take its place with ovariotomy and other similar operations as a *dernier resort*, and at the same time as a most positive relief in cases where it is appropriate.

SPONTANEOUS DISINTEGRATION OF VESICAL CALCULI.—At a meeting of the London Pathological Society (*British Medical Journal*, *June* 8, 1878), Dr. Ord exhibited several specimens illustrating the spontaneous disintegration of calculi within the bladder. All were fragments of fusiform calculi, which had been disrupted and then coated with urate of ammonia. They were evidently originally deposited from an acid urine; the urine had become more alkaline, and the outer layers were of less acid material. Owing to this change of environment, the nuclei had swollen and acted as a bursting charge. This accounted for nuclei being so rarely found in such cases.

CYSTINE CALCULI.—Southam.—(*Br. Med. Jour.*, July 13, 1878.)

Out of a total number of fifty-five cases of vesical calculi, S. reports four cases where the stone was composed almost entirely of cystine—a very large proportion. Three of these cases came from the same locality, while two of them occurred in females. In one of them the condition of cystinuria persisted for several years. Two of the calculi were removed by lithotrity, one by lithotomy, and one by dilatation of the urethra (female).

GYNÆCOLOGY.

DIAGNOSIS OF MALIGNANT OVARIAN TUMORS AND MALIGNANT PERITONITIS.—Foulis.—(*Br. Med. Jour.*, July 20, 1878.)

In one of his lectures on the above subject, Prof. Foulis, of Edinburgh, sums up as follows:

Malignant ovarian tumors are generally surrounded by ascitic fluid; this should always be carefully examined with the microscope. If in it we find a large number of sprouting, vigorously-growing cells, some of which masses may be seen by the naked eye, we may safely conclude that the peritoneum is the seat of a most serious disease, and that there are numerous adhesions between the tumor and neighboring parts, which will prevent its complete removal by ovariotomy. If these masses be found in bloody ascitic fluid, we may conclude that there are vascular, villous growths on the peritoneum; and if, in addition, the glands in the groin or abdominal parietes are enlarged, the tumor and peritoneal growths are certainly carcinomatous.

As an additional means of diagnosis the tumor itself may be punctured, under antiseptic precautions, with an aspirator needle, and a minute portion or some of its contents be withdrawn. The finding of sprouting masses of epithelium in ovarian cysts is not of much value, as such tumors may be often removed; but if they be found in the cysts of a tumor and in the ascitic fluid also, it is almost certain that serious adhesions exist between the tumor and adjacent parts, and that there are nodular growths on the peritoneum.

PATHOLOGY OF MEMBRANOUS DYSMENORRHŒA.—Cory.—(*Obstetrical Journal*, June, 1878.)

Dr. Cory related to the London Obstetrical Society the case of a patient who menstruated normally at fifteen, but never passed any membrane till after her marriage, at the age of thirty. Within two years thereafter, she had three miscarriages early in pregnancy. She almost invariably passed membranes with each subsequent period, except when she happened to have been apart from her husband. One interval of nine months without marital

approach was passed without the distressing features detailed above.

He thought the case favored the view that *her* menstrual epochs were due to the abortion of an impregnated ovum, together with its nidus, mucous membrane of the uterus—the decidua.

In discussion of the case following its report, the opinions were expressed that the term membranous dysmenorrhœa was inappropriate for such a case; that the ovum belonged to the period previous to the one during which it was expelled, otherwise no decidua could have formed; that ovulation was at best an irregular function, and that hypernidation might be produced by the uterine hyperæmia set up by marital life; that spermatozoa may live for some days, and impregnation take place after a menstrual period though connection has occurred before it.

THERAPEUTICS.

AN ADDITIONAL DEVELOPMENT OF EXTERNAL METALLOTHERAPY.—Dr. R. Vigouroux.—(*Le Progrès Médical.*)

A reference has been made in the JOURNAL to the work being done by Drs. Charcot, Vigouroux and Burg, by the application of metallic and other discs to different places in the human body in an abnormal condition arising from the vaguely defined affection known as hysteria. The result of this work is the establishment of the fact that certain hyperæsthesic and anæsthesic areas become greatly modified on the application of these discs—the proper disc, either of gold, silver, copper, zinc, iron, etc., being ascertained by actual experiment. The modification, in some cases, having resulted in the cure of some hysterical patients who had suffered for years without relief. The difficulty that has hitherto been experienced, has been the fugitiveness of the relief. Dr. Vigouroux has discovered that by seizing the moment when the relief is experienced, and placing upon the already applied disc another disc, from the application of which the patient previously received no benefit, the effect becomes if not permanent,

greatly prolonged while the two are applied. Moreover, the same effect follows when the second or neuter disc is applied merely in the immediate neighborhood of the active disc. Before we cite the two cases presented by Dr. V., it is necessary to state that the same effect follows when the modification of the abnormal condition is obtained by galvanic or statical electricity.

Examples: A patient affected with hemianæsthesia of the right side, is placed on an insulated stool. Under the influence of a simple electric bath the hemianæsthesia and achromatopsia (color-blindness) passes to the left side, then disappears. At that moment Dr. V. fixes upon the right arm of the patient (sensible to tin) a disc of brass about the size of a button. The next day the anæsthesia and color-blindness return, but on the left side.

With another patient affected with total anæsthesia, the sensitiveness being restored with the same means, usually remains only a few minutes after the operation, but a plate of brass—the patient is sensitive to zinc—being placed upon both arms, the sensitiveness remains the whole day, and the patient is advised of the return of the anæsthesia by a special sensation of fluttering (*une sensation d' abattement.*)

Another patient, with the application of a little disc of gold-plated copper—she was sensitive to gold—retained her sensitiveness for eight days, but the anæsthesia returned as soon as the disc was removed. A similar experiment with the same result was repeated sometime afterwards.

Dr. V. promises to furnish the details shortly. We shall look forward to the fulfillment of the promise with great interest.

ACCORDING to *Harper's Weekly*, the members of the New York Medical Club were invited to an entertainment, a few years ago, by Dr. H. D. Paine, of that city, in the following terms:

"SCIENS, SOCIALITE, SOBRIETE."

DOCTORES,—Ducum nex mundi nitu Panes; tritucum at ait. Expecto meta fumen tu te & eta beta pi. Super attento, uno. Dux, hamor clam pati, sum parates, homine, ices, jam, etc. Sideror hoc. Anser.

"FESTO REASONAN FLOAS SOLE."

Items.

RESOLUTIONS OF RESPECT.—At a special meeting of the Rockford Medical Association held Wednesday, July 31, the following resolutions were adopted:

WHEREAS, death has removed, after a painful and protracted sickness, our worthy associate and co-worker, A. L. McArthur, M. D. and,

WHEREAS, The members of the Rockford Medical Association desire to express their esteem and regard for his memory, therefore,

Resolved, That we have received the intelligence of his death with heartfelt sorrow, and with a deep sense of the loss sustained to the profession.

Resolved, That we will cherish his memory with the respect due him as a worthy and active member of the medical fraternity, and also record our admiration of the many good qualities he possessed.

Resolved, That we extend our deepest and kindest sympathies to the family, and that these resolutions be forwarded to them as an expression of regard for our deceased professional brother.

Resolved, That we will attend the funeral as a society, and that these resolutions be published in the city and Chicago press, and also in the CHICAGO MEDICAL JOURNAL AND EXAMINER.

A. E. GOODWIN, President.

H. W. TEBBETTS, Secretary.

THE following is the programme of the second annual meeting of the American Dermatological Association, held at the Grand Union Hotel, Saratoga Springs, New York, August 27th, 28th and 29th, 1878. Papers: Introductory remarks, by the presi-

dent, Dr. J. C. White, of Boston; on the pigmentary syphiloderm, by Dr. I. E. Atkinson, of Baltimore; on a new method of permanently removing superfluous hair, by Dr. L. D. Bulkley, of New York; a case of the so-called xeroderma of Hebra, by Dr. L. A. Duhring, of Philadelphia; on the proper use of the term acne, by Dr. G. H. Fox, of New York; a case of scleroderma, by Dr. F. P. Foster, of New York; case of inflammatory fungoid neoplasm, by Dr. L. A. Duhring, of Philadelphia; treatment of hirsuties, by Dr. W. A. Hardaway, of St. Louis, Mo.; epithelium and its performances, by Dr. C. Heitzmann, of New York; idiopathic cutaneous atrophy, by Dr. J. N. Hyde, of Chicago; case of gangrænopsis, by Dr. H. G. Piffard, of New York; the use of linseed and oil as therapeutic agents in diseases of the skin, by Dr. S. Sherwell, of Brooklyn, New York; a further contribution to the study of the xeroderma of Hebra, by Dr. R. W. Taylor, of New York; a case of ulcerative scrofuloderm, by Dr. A. VanHarlingen, of Philadelphia; a case of recurrent cutaneous hæmorrhage with urticarial and bullous efflorrescence, by Dr. J. C. White, of Boston.

The *American Association for the Cure of Inebriates*, will hold its tenth annual meeting at Boston, Mass., commencing Tuesday, September 10th, 1878, at 10 A. M., in "Union Hall." A very important meeting is anticipated.

POISONED BY KID GLOVES!—A merchant recently bought a pair of navy-blue kid gloves in Hamburg. After his arrival in Berlin, he put on the gloves and made several visits. Soon after he felt sick and languid; and a peculiar eruption appeared on the dorsal surfaces of his hands. While searching for the cause of his strange ailing which greatly puzzled his physician, the patient thought of the new gloves and sent them to an experienced chemist for examination. The chemical analysis showed a considerable amount of arsenic in the gloves.—(*Allg. Med. Centralz*).

ANNOUNCEMENTS FOR THE MONTH.

SOCIETY MEETINGS.

Chicago Medical Society—Mondays, Sept. 2 and 16.
West Chicago Medical Society—Mondays, Sept. 9 and 23.

CLINICS.

MONDAY.

Eye and Ear Infirmary—2 to 3 p. m., Ophthalmological, by Prof. Holmes; 3 to 4 p. m., Otological, by Prof. Jones.
Mercy Hospital—2 to 3 p. m., Surgical, by Prof. Andrews.
Rush Medical College—2 p. m., Dermatological and Venereal, by Dr. Hyde. 3 p. m., Medical, by Dr. Bridge.

TUESDAY.

Mercy Hospital—2 p. m., Medical, by Prof. Hollister.

WEDNESDAY.

Mercy Hospital—2 p. m., Eye and Ear, by Prof. Jones.
Rush Medical College—4 p. m., Diseases of the Chest, by Dr. E. Fletcher Ingals.

THURSDAY.

Mercy Hospital—2 p. m., Medical, by Prof. Davis.
Rush Medical College—1:30 p. m., Neurological, by Prof. Lyman.
Eye and Ear Infirmary—2 to 3 p. m., Ophthalmological, by Dr. Hotz.

FRIDAY.

Mercy Hospital—2 p. m., Medical, by Prof. Davis.

SATURDAY.

Rush Medical College—2 p. m., Surgical, Prof. Gunn.
Chicago Medical College—2 p. m., Surgical, by Profs. Andrews and Isham; 3 p. m., Diseases of the Chest, by Prof. Johnson.

Special Clinics daily, from 2 to 4 p. m., at the South Side Dispensary, and at the Central Free Dispensary.

THE

Chicago Medical Journal

AND

EXAMINER.

VOL. XXXVII.—OCTOBER, 1878.—No. 4.

To our Readers and Correspondents.

Beginning with Vol. XXXVII., July, 1878, the CHICAGO MEDICAL JOURNAL AND EXAMINER prints all records of length and weight in terms of the Metric System, and all records of temperature in degrees of the Centigrade Scale. The Metric System, legalized in the United States and Great Britain, is extensively or exclusively employed by other civilized nations, and has thus become an essential part of the international language of science. It is recommended for adoption to the profession in this country by the American Medical Association and other scientific bodies. To-day no physician can afford to be ignorant of its value, its simplicity and the meaning of its terms

The subjoined tables and scales, which have been kindly prepared for us by Prof. W. S. Haines, will be continuously reproduced in subsequent numbers of this journal, for the ready reference of our readers and correspondents.

Metric Measures of Length.

Millimeter	0.001 of a Meter	0.03937	inches.
Centimeter	0.01 " "	0.39370	"
Decimeter	0.1 " "	3.93707	"
Meter	**1.**	**Meter**	**39.37079** "
Decameter	10.	Meters	393.70790 "
Hectometer	100.	"	3937.07900 "
Kilometer	1000.	"	39370.79000 "

Metrical Weights.

Milligram	0.001 of a Gram	0.015	grains.
Centigram	0.01 " "	0.154	"
Decigram	0.1 " "	1.543	"
Gram	**1.**	**Gram**	**15.432** "
Decagram	10.	Grams	154.323 "
Hectogram	100.	"	1543.234 "
Kilogram	1000.	"	15434.348 "

☞ The United States "nickel" five cent piece weighs five grams, and is two centimeters in diameter.

Approximate Equivalent of Metrical Weights.

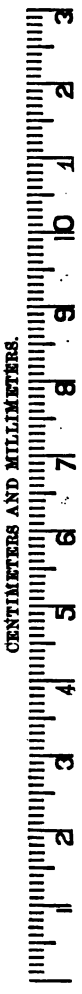
For Rapid Reference.

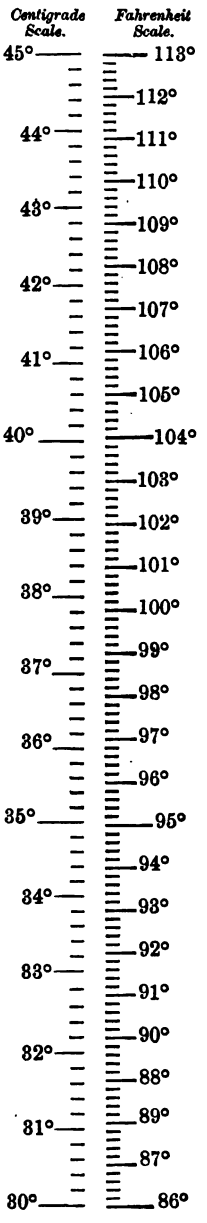
Milligrams.	*Grains.*	*Decigrams.*	*Grains.*
1 (written 0.001 or |001)*	1/65	1 (written 0.1 or |1)	1 1/2
2	1/32	2	3
3	1/22	3	4 1/2
4	1/16	4	6
5	1/13	5	7 1/2
6	1/11	6	9
7	1/9	7	11
8	1/8	8	12 1/2
9	1/7	9	14

Centigrams.	*Grains.*	*Grams.*	*Grains.*
1 (written 0.01 or |01)	1/6	1 (written 1. or 1|)	15
2	1/3	2	30
3	6/13	3	46
4	7/11	4	61
5	3/4	5	77
6	9/10	6	92
7	1	7	108
8	1 1/4	8	123
9	1 1/3	9	139

A Kilogram—2 1/5 lbs. Avoirdupois.

* The decimal *line* instead of points makes errors impossible.





METRIC FLUID MEASURES.

When using the metric system, fluids are preferably prescribed by weight, employing the gram, its multiples and subdivisions, just the same as with solids, thus avoiding the errors due to refraction, adhesion, and inaccurate measuring vessels. For practical purposes four grams of water may be regarded as equivalent to a fluid drachm of that liquid, and the same may be considered true of tinctures and infusions; syrups, on the average, are about one-third heavier than water, so that a fluid ounce of a syrup will be approximately represented by 43 grams.

If preferred, however, fluids may be prescribed by volume in the metric, just as in the present system, using for that purpose the *Cubic Centimeter*, that is, a volume represented by a cube all of whose sides measure one centimeter. An ordinary back-gammon die is usually about this size. One cubic centimeter (written 1 C. C.) — 16.231 minims. It is approximately regarded as one fourth of a fluid drachm.

APPROXIMATE EQUIVALENTS OF CUBIC CENTIMETER.

0.001	C. C.	—	$\frac{1}{65}$ minim.
0.01	"	—	$\frac{1}{6}$ "
0.1	"	—	$1\frac{1}{2}$ "
1.	C. C.	—	15 minim.
4.	"	—	1 fluid drachm.
16.	"	—	4 fluid drachms.
32.	"	—	1 ounce.

1000 C. C. (usually known as a **Liter**) is a trifle more than one quart, wine measure.

The following prescription—

R: Potassii bromidi, ℥i.
Elixir aurantii, fl., ℥viij.
M.

Would, in metric terms, be written:

Potassic bromide, 32 |
Orange elixir, 250 |
Mix.

Original Communications.

THE PIGMENTARY SYPHILODERM.

By I. Edmondson Atkinson, M. D.,

Physician to the Baltimore Special Dispensary.

(*Read before the American Dermatological Association, at Saratoga Springs, N. Y., Aug. 27th*, 1878.

Before presenting the cases whose histories form the basis of this paper, I may be pardoned for briefly reviewing the characters of the lesion of which I desire to speak.

In describing "syphilide pigmentaire" for the first time in 1853, Hardy ascribed to it peculiarities separating it from all other syphilodermata upon the one hand, and upon the other from the various forms of non-specific pigmentary abnormalities of the skin. The very lucid and faithful account of the symptoms of this lesion given by this author, has been supplemented by other writers, but has more especially received support from the pen of Fournier (Leçons sur la Syphilis etudiés plus particulièrement, chez la Femme, 1873, p. 422). According to these authors, the pigmentary syphiloderm may appear from the fourth month to the end of the second year of the disease, and is consequently one of its later secondary manifestations. It is observed almost exclusively in the female sex, occupying preferably the skin of the neck (29 times in 30, Fournier), although occasionally met with upon other portions of the body. Its symptoms are, briefly, as follows: Upon the neck, more commonly upon its lateral surfaces, appear, with or without concomitant symptoms, but invariably subsequent to other manifestations of general syphilis of other parts of the body (roseola, papules, mucous patches, adenopathies, etc.), faintly

colored spots, varying in size from that of a split pea to that of a finger nail, which rarely remain discrete, but rather run together, being connected by more or less narrow bands of similar discoloration, and forming an extent of pigmented surface resembling a clumsy network whose meshes are represented by areas of normal skin, or following Hardy and others, of skin whiter than normal (Leçons sur la Scrofule et les Scrofulides et sur la Syphilis et les Syphilides, 1864, p. 175). The color of the pigmented area is of a very faint grayish-yellow, a café-au-lait color, paler than that of tinea versicolor or than that of chloasma uterinum. Fournier compares the effect to the dirty necks of uncleanly people. It is uninfluenced by pressure.

The borders of the patches lose themselves more or less imperceptibly in the healthy skin. Their surface is smooth, absolutely without desquamation, not at all elevated above the general surface, giving rise to no subjective symptoms, and quite rebellious to treatment, whether anti-syphilitic or otherwise, enduring for months—it is even said for years.

Such, then, being a general outline of this lesion, I propose to offer the following cases as illustrating it, before proceeding to discuss the claims upon which it rests its position in the nosology of syphilis.

CASE 1. Hannah F., white, 17 years old, unmarried, of medium size and complexion inclining to brunette, with dark hair and eyes, came to the dispensary June 10th, 1875. She said that during the previous summer she had had suppurating buboes in both groins (the scars of which are at present visible). Shortly after this she had sores upon her vulva, and five months ago an eruption first came upon her skin. Upon examination, her labia majora and minora were found to be very œdematous and infiltrated from the irritation of numerous mucous patches, which also extended along the perineum. Over her thighs and abdomen were the stainings left by a previous syphilitic eruption. Mucous patches were present upon the faucial mucous membrane. There was a general adenopathy, especially marked in the cervical region. Distributed over the neck and shoulders, and extending over the deltoid region of the arms quite symmetrically, were, what appeared upon superficial examination to be spots of

abnormally whitened integument, scattered irregularly and discretely over the surface. Upon more rigid examination, these spots, which did not exceed from six to twelve millimeters in diameter, were seen to be not whiter than normal, the true alteration being evidently in the surrounding portions of the skin. This alteration consisted of pigmented spots extending over the front and sides of the neck and shoulders, and connected with each other uninterruptedly, except where the patches of normal skin seemed to be inserted, forming the network-like appearance characteristic of the eruption. This maculation, which resembles in coloration a faint chloasma uterinum, is less pronounced than that of tinea versicolor, and also differs from that following the ordinary syphiloderms, being paler. The surface was perfectly smooth and free from desquamation. There was no itching. The patient was, however, much mortified at the dirty appearance of her skin, which, when first noticed by her a short while ago, was just as at present. She was of careful, cleanly habits, and was quite sure that there had been no alteration in the appearance of the eruption since it was first noticed. She was subjected to an appropriate mercurial internal and external treatment, which was followed with considerable regularity. Upon July 24th, it was noted that the treatment had effected the disappearance of all the mucous patches except one at the fourchette, and that the labia were becoming much less infiltrated. The maculation about the shoulders and neck persisted, though fainter. She was under treatment steadily until August 11th, the maculations becoming fainter, and general improvement being steadily experienced. She was not seen again until January 25th, 1876, when she informed me that she was married and three months pregnant. Upon examination, she appeared quite well, the infiltration of the labia having quite disappeared, as well as the maculations upon her neck and shoulder. She did not again come under observation.

CASE 2.—June 19th, 1877, Becky H., a young prostitute, born in Pennsylvania, 19 years old, of moderately fair complexion, with blue eyes and light hair, and of healthy appearance, applied at the dispensary to be treated for a vaginal discharge of three weeks' duration. She said she had had a similar

discharge during the previous January. Upon physical examination, the integument of her abdomen and chest anteriorly, and of her thighs, was well sprinkled with a fading roseola. There were no signs of an ulcer upon the genital organs, but there was a painless inguinal adenopathy. She was kept under close observation until July 7th. She re-applied October 23rd, complaining of pharyngeal mucous patches, but without any cutaneous eruption. December 8th. The mucous patches which had healed, had now returned. December 29th. Having now been at least seven months syphilitic, it was now noted that upon both sides of her neck, arranged with tolerable symmetry, were a number of faintly brownish spots, similar in coloration to those of the previous patient. They were limited to the sides of the neck, and did not *inclose* unpigmented areas, not being connected so as to form the usual network. She had been almost constantly under my observation, and neither she nor I had observed a previous eruption upon these parts. She quite decidedly denied that any such had been present. There were no subjective symptoms, and the spots were smooth, unelevated, and not desquamating. Their margins were not very well defined. By February 19th, the maculations were much fainter, but had undergone no change in distribution. March 3rd. There had been for several days a right iritis. The maculations had not diminished in size or configuration; they had simply faded, and more nearly approached the normal hue of the skin. During all this period, the patient was almost constantly undergoing a mercurial treatment. She has not again come under observation.

My third case was an anomalous one in several particulars, and I have hesitated before including it with cases of pigmentary syphiloderm, having never seen a similar condition; but upon reflection I am unable to assign it to any other form of syphilitic eruption than the one under consideration. It is as follows, viz.:

CASE 3.—Annie J. came to the dispensary October 10th, 1875. She was a light mulatto, 18 years of age, and of a moderately healthy appearance. At the posterior commissure of the labia minora there was a soft spreading ulcer, accompanied by indolent inguinal adenopathy. She had, also, some sore

throat, enlargement of the cervical glands, and complained of pains in the arms and sides. No reliable history could be obtained, although it was evident that the lesions were of some duration. The sore was cauterized with the acid nitrate of mercury. She did not again appear at the dispensary until March 28th, 1876, five months after her first appearance. She then said that her eyes had been troubling her for about two months. This was found to be due to a double iritis; and there was a small perforation of the left cornea, through which the iris slightly protruded. Upon the thighs was a fading papular eruption. Upon the dorsal surfaces of the hands and wrists, and upon the inner and extensor surfaces of the knees, were very symmetrically arranged mottled appearances, resembling, when seen at a distance, old scars from burns, but really due to pigmentary changes alone. According to her, they had been present nearly all winter. As in my first case, my first impression was that the lighter-colored islets were the affected portions, but a moment's careful examination served to correct this error. These areas, which varied in size from five to fifteen millimeters in diameter, were of the color of the normal skin, and only appeared lighter by contrast with the surrounding darker surface, which was almost black, and extended continuously, the different spots being connected by narrow bands, and forming the lace-like arrangement already spoken of. The borders were abruptly margined. The normal café-au-lait color of the general surface contrasted strikingly with the hyper-pigmented portions, the general effect seemingly justifying the term piebald in describing it. No other portion of the skin was similarly affected. She was last seen May 31st, when, after taking cod liver oil and the syrup of the iodide of iron, she was much better. The maculations had faded from her hands, but were still present upon the inner surfaces of both knees.

The pigmentary changes of which the foregoing cases afford examples are so unfrequently observed that many writers have been led to deny that they are to be considered direct results of syphilis. The insignificance of the symptoms, and the probability of its being frequently overlooked must, however, be considered. Dr. G. H. Fox, who, however, regards the lesion as a

vitiligo, very properly draws attention to this point (*Amer. Journ. Med. Sciences*, April, 1878), and thinks that it will much more frequently be observed, when searched for, even in the male sex. On the other hand, there is danger that there may be committed the error of including with the pigmentary, syphiloderm, lesions of variously different origins. These are principally the chloasmata, chloasma uterinum, and chloasma cachecticorum, and the stainings left behind by a roseola syphilitica. (It is hardly necessary here to refer to the danger of confounding tinea versicolor with the pigmentary syphiloderm, since the points of a differential diagnosis are always at hand in the presence of a parasite in the desquamated epidermis of the former.) The ordinary chloasmata may usually be distinguished by attention to their color, distribution and configuration, as well as to the constitutional conditions of the patients. Their color is usually darker; they are more uniform in their distribution, not inclosing the mesh-like spaces, and are most rarely confined to the neck, the favorite seat of the lesion under discussion. (The chloasma that is seen frequently in old syphilitics, is simply due to the cachexia, and is altogether unlike the truly syphilitic form.)

The stainings left behind by a syphilitic roseola, to my mind, more nearly approach, in their characteristics, the pigmentary syphiloderm, than any other form of lesion. It is not at all uncommon to see upon the abdomen especially, tracts of hyper-pigmented skin inclosing circular areas of normal color. These tracts are the remains of syphilitic roseola; but here, however, there is usually the clear history of a preceding hyperæmia, the hyper-pigmentation is much more extensive, and its duration much less prolonged. The especial point of distinction, however, is that the pigmentary syphiloderm appears independently of any preceding hyperæmia, according to the almost universal opinion of those who have observed it, and to the unanimous opinion of the patients. Until convincing clinical proof of the necessary pre-existence of this hyperæmia is produced, those who believe in the reality of this syphiloderm are entitled to hold to their faith.

There are others who, recognizing the fact that the pigmentary

deposits are not due to preceding hyperæmia, consider the non-pigmented areas, or, as they claim, the whitened patches, to be the seat of the true morbid process, and that the lesion is a pigmentary atrophy of the inclosed spaces, around which there is an increased deposit of pigment, as is usually the case in acquired leucoderma.

It is true that some writers, as Hardy and Drysdale, while considering the hyper-pigmentation to be the essential lesion, also think that these inclosed spaces contain less coloring matter than normal; and admitting that this occasionally is the case, it becomes possible, in a narrow sense, to designate such condition as leucodermatous. But in doing this we simply beg the question, since the transient and always very limited blanching, is invariably accompanied by a hyper-pigmentation always equaling, almost always exceeding, it in extent, and which has at least equal claims to be considered the essential lesion. I think it especially unfortunate that Dr. George H. Fox, who has most ably expressed his view of the leucodermatous nature of this affection, should have used the term vitiligo to designate it, a term that has been pretty generally applied to that form of lesion where there is a permanent, complete and usually progressive centrifugal disappearance of cutaneous pigment. It is true that Dr. Fox is unwilling that vitiligo should be thus restricted in its meaning, but nevertheless, in describing it, he quotes Dr. Duhring's definition of the condition, which certainly has reference to a definite, progressive and permanent loss of pigment.

It may be properly objected to the view that the supposed leucodermic patches occupy the sites of previous hyperæmic eruptions, that it is the positive opinion of other writers, based upon their personal experience, that the pigmentary syphiloderm as observed by *them*, has never succeeded upon the site of an antecedent eruption. The leucodermatous condition, moreover, is certainly not present in all cases, and it is a fact, as observed by Hardy, and evidenced in my second case, that the hyper-pigmented spots may occur without including islets of normal or whitened integument.

The resistance offered by this lesion to the influence of anti-syphilitic remedies, undoubtedly affords their most efficient

weapon to those who combat the doctrine of its syphilitic nature. It is, for example, argued that all syphilitic alteration, especially those of the earlier constitutional periods, are promptly antagonized by the administration of mercury, and that the hyperpigmentation under discussion, not being modified by this drug, cannot be a syphilitic manifestation. Such a conclusion is based upon incorrect ideas of the nature of the pigmentation. The pigmentary changes following the earliest syphilitic symptoms are always due to the pre-existing hyperæmia—their duration and intensity are usually proportioned to the duration and character of the hyperæmia, and they are principally deposited in the connective tissue of the corium, in the region of the vascular distribution. The rationale of pigmentation is too little known, but we do know that pigment disappears readily after the recession of a hyperæmia of short duration, while after an old eczema or chronic ulcer, it may remain for many years. Why this is so, is not known. It is a matter of universal clinical experience that the pigmentations following the early syphilitic eruptions are but little disposed to become permanent, and are readily re-absorbed. With the pigment substance of the epidermis, on the contrary, the case is different. Here the hyper-pigmentation may readily occur quite independently of hyperæmia, and is due to an increase of the melarin, the physiological pigment of the skin.

It is a matter of general experience that the non-vascular hyper-pigmentations are provokingly obstinate, and beyond the reach of internal medication. No one can explain why the different cachexiæ, or why uterine disorder should induce a hyper-pigmentation in the rete malpighii. There is no reason why the syphilitic dyscrasia, as distinct from any cachectic condition, may not equally evoke similar pigmentary changes, and with the light thrown upon the subject from time to time by corroborative cases, I have no hesitation in saying that it does evoke them, and venture to suggest that they may be amenable to the same therapeutic agencies.

INFLAMMATION.

By Wm. A. Atkinson, M. D., D. D. S., New York.

(*Read before the American Dental Association, Aug.* 8, 1878.)

The gradual growth to higher and better interpretations of the phenomena of inflammation, as displayed in the works of John Hunter, Virchow, Remak, Billroth, C. O. Weber, von Recklinghausen, Conheim and Stricker, not to mention many others, are proofs of the want of complete satisfaction with which each has looked upon the labors of his predecessors and co-workers, as well as upon his own efforts.

Till this day it is impossible for the best observers to designate the point at which physiological activity becomes pathological. It is at least an entertainable proposition that some of the normal operations attendant upon the ripening of ova and spermatozoids are properly classifiable as inflammatory activities.

Histological research has shown the "corpus luteum" to be composed of scar tissue, of a like character with scars resulting from traumatic and inflammatory lesions. Excess of blood plasm in any locality is liable to be converted into embryonal corpuscles or mucous globules, as the indifferent basis from which normal and abnormal products arise, according as the environment tends to lead to one or the other. Simple hyperplasia tends to increase of the normal tissues. When the blood tracts are obstructed, and the press of the currents great, stasis, exudation and retrogressive molecular changes take charge of the exuded blood plasm, and convert it into the products of the inflammatory process, which this retrogressive metamorphosis constitutes.

Late histological discoveries strongly indicate that nerve currents and blood currents are necessary conditions to allow inflammation of any territory. All those territories therefore that are not supplied with blood circulation and nerve currents, if unaided by adjoining currents, are incapable of inflammation and of repairing their wounds when traumatically induced. When the neural and vascular currents are coëtaneous and unobstructed,

it is doubtful if any mere acceleration could result in the inflammatory process, but when the heart's action is too great to exactly balance the tonicity of the capillaries supplied by the nerve currents; obstructions are readily induced in the tortuous channels of the capillary system.

To prevent the inevitable advent of inflammation under such circumstances, the obstructions must be removed, and the simultaneousness of nerve currents and blood currents be regained. The simplest method of accomplishing this desirable end will be to call the part into vigorous exercise by voluntary or involuntary effort of the subject, or by "massage," or the manipulation of another person. The only reason why all inflammations might not thus be successfully treated depends upon our inability to recognize the departure from health at this early stage, and to get at the locality.

Swelling, redness, heat and pain have universally been grouped together as the definition of the inflammatory process. No one has put on record even an approach to legitimate, clear and satisfactory statement of the precise difference between normal nutrient function, and its derangement called inflammation.

Let us examine the process of conversion of pabulum (protoplasm) into the elements of tissue, and learn if we may, that pleasure and pain, health and disease, are qualities or modes, and quantities or measures of functional activities that vanish into each other by disturbing and restoring the balances of regular molecular changes. To comprehend these we must cognize the existence of atoms of which the molecules are composed; and to understand the manner of the coming together of the atoms to construct the molecule, we must take into consideration the static and dynamic aspects of the atoms, no less than the awakening and engagement of the definite measures of energy that effect the combinations. Why? and how? the molecules move, are the two questions the exact replies to which shall reveal to us the complete explanation of all functional movements, and declare how they are produced and maintained or destroyed in functioning bodies.

Pain is the result of obstructed sensory nerve current; *swelling* supervenes upon obstructed vascular current; *heat* is resultant upon obstructions in the neural and vascular channels by

which the mechanical movements of the masses of nerve blood and vascular blood (through impact against the points of obstruction) become changed into molecular movement which we cognize as *heat*. These three, viz., pain, swelling and heat, are the only essential factors or necessary concomitants in the process of inflammation. The redness that has heretofore been made an equal factor, is a mere incident, as is proved by the fact that some swellings are white.

What are we to understand by quality or mode, and quantity or measure of function? And how are we to differentiate these predominant aspects of the complex presence we call function of mind and function of body? The function of mind consists of seriated arrestations and releases of the tensions of consciousness, or the power of perception. The functions of body are also seriated successions of arrest and release of tensions of combinations and separations of molecular and atomic bodies, through which the energy operates to produce molecular, granular, corpuscular, tissual, organic and systemic forms of function in their various manifestations.

Late works on chemistry assert that heat is given out or produced by combinations of atoms, and is taken up or quenched by separations of atoms. Works on physics tell us that "heat is a mode of motion," and that "mechanical motion upon being arrested is converted into molecular motion, which is heat." How then are we to account for the heat set free upon the admixture of sulphuric acid and water? How does the friction produce the heat so largely by the mere rushing of the molecules of water among the molecules of acid?

The partially engaged, unsatisfied or sleeping bonds of affinity belonging to the atoms in the molecules of water and acid are in a state to be easily aroused into active motion by any impact of current within the sphere of influence, be it direct or oblique, simple or manifold in its advent. We understand the diffusion of water-molecules and acid-molecules to result from the desire to attain equi-distance from each other in the mass of fluid; and the rush to acquire that tension effects the awakening of the sleeping bonds of energy, which being set in motion, manifest the intense measure of heat always attending this experiment.

The difference between this process of disengagement of heat and that form attendant upon the inflammatory processs in animal bodies, consists in the greater complications of engagements and disengagements of bonds of affinity in the molecular mass in which these changes occur; and the greater freedom of the fluid in the vessel of the chemist, as compared to the confinement of molecular mass in the tissual interspaces of animal organisms. There is also a larger number of elements entering into the molecular mass which is the basis of all animal forms of metamorphosis, than in the mass composing the vegetable or mineral examples of molecular aggregations. Hence the increased opportunity for the display of greater varieties of molecular changes that split up and minify the thermal and other currents possible to this limited territory.

There is such a thing as having the receptacle of molecular mass so packed with molecules as to preclude any motion among them. This has been proven by the stoppage of fermentative action by the pressure of a given number of atmospheres. Take the example of a fermentable substance placed in an air-tight transparent vessel, exhaust the air by the air pump, and then inject into the receptacle a quantity of yeast taken from the tub fresh and active. At first bubbles of carbon-di-oxide (carbonic acid gas) will break and rapidly disperse into the vacuum above the yeast, and there being no free oxygen present to support the fermentation, molecular change ceases to appear. Now admit pure oxygen in a small quantity, and the fermentation is again set up with increasing activity, in the ratio of the quantity of oxygen supplied up to a given measure. So soon as the tension or pressure of the incoming current of oxygen shall interfere with the freedom of the oxygen molecules in the space above the yeast, the activity of the fermentative change gradually lessens by degrees and finally ceases altogether. When the compression of the oxygen is great enough to arrest the motion of the oxygen molecules, they assume a static condition, preventing further changes between the oxygen and the hydro-carbons of the yeast. The yeast in the vessel is now in the condition of a "pop-bottle," or a bottle of "mineral water," fully charged with carbon-di-oxide. All that is requisite to re-establish the fermenta-

tive activity is to take off the pressure from the gas above the yeast in the vessel by giving it vent, so that the molecules of oxygen may be free to move among each other again, and then the attraction between the oxygen and the carbo-hydrates of the yeast mass is at once set vigorously at work, generating molecules of alcohol and carbon-di-oxide out of the already existing albumen, glucose or diastase in it.

The alternate combination and separation of atoms to construct the varieties of molecules in the mineral, vegetable and animal primates of bodies, is repeated and amplified, magnified and minified, by the necessities of the types of the individual presence in the various crystals, cells and corpuscles that are the characteristics of the three kingdoms known to exist as planetary presentments. A serial order of appearance and disappearance (or coming from without and passing beyond the range of our sensuous perception) pertains to the origination, growth and decline of every example of individual body or class of bodies, be they mineral, vegetable or animal. The chaotification of these gives the foundation from which all human functional capabilities originate; so to understand all the activities possible to human bodies, we must become acquainted with the activities of the whole universe of which man is the epitome.

"The whole is equal to all its parts" is an aphorism in the study of inflammation as true as it is in mathematics, astronomy and physics. The combustion of hydrogen and carbon with oxygen is well known to produce *heat.* Friction also produces heat to the degree of ignition of combustible substances. Are we not then justified in assuming that the heat of fever and inflammation is also the product of combustion and friction? And does not this indicate that whatever prevents or arrests combustion will also arrest fever and the inflammation upon which it depends? The difference between fever and abscess is the difference between the combustion in a charcoal pit and in an open fire. The first extracts the hydrogen from the combustible substance, and leaves the particles of carbon in their undisturbed position in the charcoal or the coke; the second oxidizes the carbon and hydrogen, converting them into carbon-di-oxide and water, both

of which conspire to change the mineral constituents of the wood or coal into the salts of which their ashes are composed.

If we desire to understand just what fever and inflammation are, we must comprehend the process of combustion. Combustion is the undoing of the work of the sun which constructs mineral, vegetable, and animal tissues. How does this occur? Simply by the influx of an energy that enables the oxygen to disrupt the bonds of affinity which "clamp" the atoms in the molecules; and the formation of other molecules by the use of these "clamps" in a different order of engagement of bonds. * * * * * * * Multivalent atoms are those which have many bonds engaged. We may conceive that these are placed in the "center," or "skeleton," or "nucleus" of the molecule around which the atoms having few (2 or 3) bonds engaged, are distributed in a variety of ways as its flesh. This variation of the "skeleton" and "flesh" of the molecule is the measure of the differentiation among proximate principles. Slow oxidation of moist organic substances, especially those containing nitrogen, gradually consumes without sensible elevation of temperature. This has been called "eremacausis," (or burning by slow degrees.) Fermentation and putrefaction are both examples of oxidation also, but with sensible elevation of temperature.

Fermentation is distinguished by giving off no offensive gases, and by producing useful compounds. Putrefaction is characterized by the exhalation of offensive and deleterious gases. * * *

By this play of affinities, under the direction of the demands of the types of all forms of molecules composing human protoplasm, we have the elaboration of all the proximate principles belonging to the tissues of the human body, embryonal and adult, of a healthy or diseased character. Just how it is that the changes of position of molecules effect difference in the proximate principles of protagon, neurine, myeline, mucine, olein, margarin, cholesterine, cerebrin, lecethin, and a host of others (insolable, real and hypothetical bodies, nevertheless veritable radicals of the deciduous and permanent tissues of the body) is not just yet demonstrable without great labor with expensive apparatus.

But we do know and can demonstrate that tensile strength belongs to fluids as well as solids (if not to gases also). Bubbles on

pure water prove the tensile strength of H^2O to be a fact which is more easily displayed by adding soap or other viscous substance to the water, after which bubbles of large size and great strength may be formed, which retain their shape long enough to permit elaborate inspection. Another proof of the tensile force of water may be shown by pouring it from a perforated vessel on a smooth pool, when many spherules will be seen to roll over the face of the placid sheet for some time before melting into its body. It is said a stratum of air intervenes between the drops and the pool—but what enables each drop to maintain its sphericity if it be not the tensile strength of the water?

The rushing of the molecules of protoplasm under the stress of the inflammatory process has many degrees of rapidity, hence the variety of the so-called products of this process. It may be affirmed that the first degree results in *pus*—a simple, inoffensive body of dead blood, fluid and corpuscular. The second degree is *sanies*—an offensive, decomposing mass of dead blood, evolving sulphuretted hydrogen. The third degree is *ichor*—a yet further disintegration of blood, mixed with dissolved and rotten tissues, soft and hard. All that follows in this disgusting recapitulation (of demoniac possession) is the complete subversion of physiological dominion by chemical control of the elements of flesh and bone. * * * * * *

How do we subdue fire? First, by cutting off the supply of fuel; second, by quenching the flames. How is this last best accomplished? Not by water, unless it be sufficiently abundant to flood the whole body of the combustible on fire, but by enveloping the whole mass in a sheet of carbon-di-oxide or any fluid or vapor having no affinity for oxygen, or into which oxygen does not enter as a constituent. Where the fire is well kindled in an obscure building or part of a structure, it may be wise to isolate that locality and allow the fire to burn out. Just so in local inflammations in territories that can be cut off, preventing contamination of the whole system, it will be wise to ligate or compress the channels of neural and blood supply, until by thus establishing physiological rest, the morbific form of metamorphosis is arrested. Afterward normal nutrition may be depended upon to

spontaneously take charge of the territory upon the re-entrance of nerve and blood supply.

Paronychia ("run-round") which is an acute inflammation, has often been aborted by persistently plunging the finger into lye of wood ashes at the boiling point, dipping it in and out at intervals of a few seconds, until the nerve currents and blood currents were so controlled as to discontinue the pain and swelling.

Whenever this method is vigorously and persistently pursued a rapid cure is attained. Even that terribly painful periosteal inflammation called felon, may be aborted, or cut short, by tightly bandaging the finger or thumb. To be sure some pain may follow this method, but it is better to pursue this course, even though no anæsthetic be used to bridge the period, than to let it run its own course to full suppuration. The safest anæsthetic to use in such cases is ice or ice and salt, to produce numbness of the part until the retrogressive metamorphosis may be controlled. Evaporating lotions of various substances are worthy of trial, one of the best of which is common ether (falsely called sulphuric ether.) Rhigoline is also efficient. * * * *

Depletion by diaphoresis, catharsis, or phlebotomy coupled with nauseants pushed to the accomplishment of the purpose (viz.—arrest of inflammation) are methods within the reach of all, and absolutely harmless in the hands of ordinarily intelligent patients and practitioners. Bandaging answers a valuable purpose in our efforts to produce physiological rest of inflamed territories. Strips of sheet rubber, judicially applied, are excellent means to drive back the excess of blood in the extremities. In cases of bruises, or loss of tone of the capillaries from any privation of nerve currents inducing sugillation, such as the petechia (or flea-bite) of low forms of fever, the application of a succession of layers of contractile collodion is an admirable means of removing the blood from these extravasated spots and from the congested capillaries. Eruptions of all sorts that appear as pimples if left to themselves, may be successfully treated by the use of collodion applied in the manner indicated, and faithfully renewed whenever it cracks, until the danger to the face, neck and exposed portions of the skin, is past.

With these principles and remedies, and methods of applying

them, coupled with a little common sense and entire control of the patient, no one is justified in allowing inflammations to run their natural course, as is the almost universal practice among general and special surgeons.

A MODIFICATION OF THE STYLE.

S. O. RICHEY, M. D., CHICAGO.

It is unnecessary to reiterate recognized facts with regard to the persistence of inflammation of the lachrymal sac and the nasal duct, and the obstinate resistance of strictures of the duct, to treatment. Forcing water through the passage is a method which, in some cases, has given good results, but chiefly in those in which the obstruction is due to inflammation of short duration. When structural changes have taken place in the duct with the formation of strictures, the treatment just mentioned is of small value, and more radical measures are called for.

The frequent passing of probes to dilate the strictures generally produces so much irritation as to keep up the trouble. The hollow style has enabled us to obtain better results by keeping open the passage, while it adds to the patient's comfort by allowing the tears to pass in the direction of their natural channel. When the style occupies the duct there is no chance of forcing any fluid through the duct itself by the side of the tube, and therefore, to treat the lining membrane of the sac and duct, the instrument must be partially or wholly removed, that the canal may be washed out, and the applications made.

The withdrawal and replacement of the style has much the same effect as passing the probe, and the object of the present modification is to obviate the necessity for removing it frequently, while by means of a small syringe it may be cleansed, and the requisite application made to the affected surface.

The change which I have made consists merely of numerous perforations, allowing free communication between the inside and the outside of the tube, thereby exposing as much as possible of the lining membrane of the canal while the style is in position.

Sufficient only of the metal forming the tube is left to maintain the required shape of the instrument, and thus to preserve the dilation of the strictures.

The wood cut represents a style the size of No. 8, Bowman's probe; its usual length is about 3.33 centimetres. The perforations answer a double purpose, viz: they permit any secretion from the membrane to pass into the tube, whence it may be washed into the nostril, thus preventing its accumulation in the sac and duct, and the irritation which its presence there would naturally cause; they permit the medicated fluid to reach the membrane, which has already been freed from the secretion; both of which objects may be accomplished without withdrawing the style. After a little practice the patient may be able to perform the service for himself, which is a special advantage, when he can not remain constantly under the supervision of the surgeon.

The style may be made to correspond in size with any of Bowman's probes, from No. 5 to No. 8, inclusive, and may be procured of Sargent & Co.

THE NECESSITY OF MORE HEROIC TREATMENT IN CASES OF LUMBAR ABSCESS.

By Edmund Andrews, A. M., M. D.

(Professor of Surgery in the Chicago Medical College.)

The condition of surgical literature on the subject of lumbar abscess is a disgrace to science. Saying nothing of spinal disease, a frequent cause of lumbar abscess, in discussing which our standard authors show an astounding ignorance of the present state of orthopedic surgery, let us pass on to the operative treatment of the abscesses themselves. In this department the surgical authorities are in utter and hopeless contradiction, and what is worse, where they find themselves destitute of a solid scientific basis for their opinions, many of them have not the manliness to acknowledge the situation, but emit a perfect fog of loose and random opinions to cover their ignorance.

Science above all things should be candid and truthful. When shall we have a body of savants who will not only state what they know, but will in humility and honesty acknowledge what they do not know?

In respect to the opening of lumbar abscesses, Sir Astley Cooper advised to evacuate them with valvular incisions from time to time, keeping them carefully closed between the operations. This was to avoid the decomposition of the pus with the consequent hectic and pyæmia which follows so frequently where the incision is left open. Chelius and Lawrence agreed with Sir Astley, Dupuytren advised not to open them at all, but to let them break spontaneously. Abernethy advocated the plan of valvular incision. J. S. South advised to wait until the abscesses were just about to burst spontaneously, and then to open them with a small puncture, leaving them open for gradual evacuation.

Gross declares that these abscesses all spring from carious vertebræ, contrary to the opinion of the rest of the profession. He says there is little or no hope of cure or benefit by any known local surgery, and therefore he very honestly omits to recommend any. He has no faith in antiseptic plans.

Erichsen says, wait until the abscess is about to burst spontaneously, and then evacuate it either by a valvular incision, by aspiration, or by Lister's antiseptic plan.

Ashurst, of the Episcopal Hospital, Philadelphia, says, do not open them at all, but let them burst spontaneously; but if you insist on opening them, use Lister's antiseptic plan.

Bryant, of London, says, open early and freely on the antiseptic plan.

Gant, of the Royal Free Hospital, London, advises to wait until the abscess is ready to burst, and then to evacuate it with a valvular incision, and close it again.

Frank Hamilton, of New York, directs first to invigorate the general health with tonic treatment and then to open the abscess, but to use no antiseptic injections, drainage tubes, tents nor even probes; at least not until it has been discharging for some weeks.

Callender, of St. Bartholomew's Hospital, London, says, open early, insert drainage tubes as far in as possible, and inject

antiseptics at once, using pressure to make the fluid penetrate the remote parts of the sac.

Holmes, of England says, allow the abscess to burst spontaneously.

Heath and Owen, of London, direct to open it, insert a drainage tube, and use antiseptic injections under pressure.

Druitt counsels opening from time to time with small punctures and reclosing them.

Lister, late of Glasgow, now of Edinburgh, advises to open the abscess and to use drainage tubes, with antiseptic injections and dressings.

From this melange of contradictions the practical physician and surgeon is expected to evolve a rational plan of treatment, and it is no wonder that some, like Prof. Gross, give it up as an insoluble conundrum.

But there is no need of this confusion of ideas. Some truths in surgery are irrevocably settled and they are just as applicable to lumbar abscess as to similar collections of pus elsewhere, only they need a little more heroic energy in their use.

First. We all know that large collections of pus undergo a disastrous putrefaction if they are opened to the external air, and that hectic, fever and fatal pyæmia are prone to follow at once.

Second. If this opening is made so as not to admit the septic germs of the atmosphere, or if antiseptic injections and dressings are faithfully used, the evacuation is usually free from danger.

Third. Drainage tubes, when efficiently used, prevent the contraction of the outlet, allow free evacuation and admit of efficient antiseptic injection, and when such injections can be made to bathe the whole interior of an abscess, they will almost invariably stop the suppuration with its whole train of disasters.

Callender, of London, recognizes the truth of these principles and has applied them to some extent to lumbar abscesses, as have also, Heath, Lyster and Owen.

There are peculiar difficulties of a mechanical nature to be overcome in these vast abdominal collections of pus, which now demand our attention, and which, as I maintain, will often

require more heroic treatment than has hitherto been brought to the attack.

The abscesses under consideration, commence in the vicinity of the psoas muscles, sometimes in carious vertabræ, and sometimes in the loose connective tissue of the vicinity without any bone disease. Hence they are often called psoas abscesses, or if they commence in the iliac fossa, iliac abscesses. Wherever they originate, they may extend both upward and downward, and at last break externally. In most instances they point either above in the lumbar region, or below in the front half of the thigh, passing under Poupart's ligament. There is no definite rule deciding which direction will be taken, and some abscesses point both above and below simultaneously. The cavity is vast in size and irregular in form, but it is conspicuously divided into two parts, viz.: the internal sac, contained within the abdominal walls, and the external sac which spreads out between the skin and the deep fascia. The internal sac discharges into the external one through a long, crooked and narrow outlet.

Now two difficulties have hitherto beset the treatment of these cavities by antiseptic injections.

First, the liquid thrown in is prone to fill only the external sac, and to be so resisted by the long, narrow fistula, blocked with pus, which leads to the inner cavity, that it fails to reach the far off interior, and consequently arrests neither the suppuration nor the decomposition. It is to meet this difficulty that Callender, and a few other English surgeons lately advocate what some of us have already practiced a considerable time in Chicago—viz., the use of injections forced in under pressure, in the hope of thus reaching the interior recesses. The other difficulty is that both the opening in the skin, and the fistula of connection between the two sacs are prone to contract, so as to resist equally the evacuation of the abscess and the injection of antiseptics.

Both here and in London, we have endeavored to counteract this by the drainage tube, but too often could only insert it into the external orifice, while the internal fistula of communication was either wholly missed, or only tubed through a part of its length. It is just here that I wish to advocate more heroic meas-

ures. I think the internal sac should be reached at all hazards, or if that is too strong a term, at some hazard, for if it is not done, the patient will have to meet a terrible increase of danger. If the abscess points in the lumbar region, the operation is not seriously difficult. After reducing the size of the cavity by a suitable number of preliminary tappings, the external sac, which is only covered with skin and fat, should be freely opened and its interior searched with a sound or catheter to find the fistula leading inward. If there is difficulty, the incision may be prolonged upward as far as necessary. When the route is discovered, a drainage tube must be carried well into the interior of the body, and made the route of copious, and if need be, forced injections.

If the pointing of the abscess is below Poupart's ligament, the difficulty is greatly enhanced, but the principles of the operation are the same. The external sac ought, in my opinion, to be laid open to any extent necessary to enable the surgeon to find the upward route, and then measures should be taken to pass a flexible drainage tube far up into the abdominal part of the abscess. In old contracted cases I have sometimes found it impossible to accomplish this. Now if the patient in such case is found to be steadily running down in health, he will be, I think, justified in running some risk, since he has little ground of hope in any other way. It would be obviously possible to first make a dissection below Poupart's ligament and finding the fistula, pass a tube as far up into the iliac fossa as possible; then we could make an incission above the ligament in the way we do when tying the iliac artery, and carefully lifting the peritoneum from the iliac muscle, we shall soon feel and reach the tube inserted from below. Now we can open and enlarge the fistula upward and place a drainage tube quite up into the lumbar region, and bring out its lower end above Poupart's ligament. If this route in any case is thought unadvisable, I would advocate cutting in at the lumbar region as in lumbar colotomy, only keeping very close to the quadratus lumborum muscle, and following its inner surface inward to the psoas, cautiously lifting up the peritoneum until the abscess is found. In case of difficulty in finding the cavity of pus, exploration with the aspirator would often show the route. Once found, the abscess could be furnished with a drain-

age tube running straight outward, and placed in conditions well adapted to effect a cure.

Of course I do not advise to subject every patient to this bold treatment. The proper course is clearly this.

As soon as the abscess points at all externally, it should be aspirated, running the needle in obliquely in the thicker portion of the sac, so as to ensure re-closure. To prevent septic results, the needle and the skin should first be carbolized. When the cavity is partly filled again, it should be aspirated a second, and if necessary a dozen times.

In this way no perceptible risk is run, and in many cases the pus will be found gradually becoming more serous, and showing fewer corpuscles, until at length it is almost as transparent as water, and the abscess is gradually obliterated without ever having been open to the air; meanwhile the patient gets fat and rosy, and shows none of the dangerous symptoms resulting from open air discharges. If the pus continues to form too persistently, the cavity can be washed out at the time of each tapping with carbolized water.

However there are two circumstances which may prevent success. First, the puncture of the aspirator needle may fail to heal, and commence some day to discharge. This accident is frequent, and in expectation of it the patient should be provided beforehand with the means of instantly making a carbolized injection and dressing without waiting for the surgeon. The other obstacle to success is that the pus may be filled with curdy concretions, so that it will not run through an aspirator, nor even through a large trochar. In this case I advise a free valvular incision, and the evacuation of clots and all through it, with an effort at re-closure. If this effort fails, I would have prompt recourse to a drainage tube, with any incisions and operations which may be found necessary as above stated, to insert the tube well within the inner sac.

I have not yet been obliged to make the elaborate pelvic dissection from below, but I have tubed the inner sac three times from the lumbar region, twice with complete success, the patients appearing now out of danger. The third case was a remarkable

one, for the abscess pointed in both groins, and in the lumbar region, discharging from all three points at once.

I tubed the inner sac through the lumbar route, and apparently for some months arrested the downward progress of the patient; however she resided in quarters which were foul with putrid air, and which had no possibility of ventilation. She died at last of an attack of accute gastro-enteritis.

In conclusion, I would urge again the importance of early and energetic surgical action, and, if the preliminary measures fail, the resort to bold operative measures to enable us to drain and inject the internal sac of the abscess.

No. 6 SIXTEENTH ST., Sept. 2, 1878.

ON SOME NOVEL MODES OF RELIEF IN CERTAIN VISUAL DEFECTS.

BY H. GRADLE.

(*Paper read before the Chicago Medical Society, August 5, 1878.*)

GENTLEMEN: My remarks of this evening pertain to a case of conical cornea under my care some months ago. The patient, a lawyer, some 42 years of age, gave the usual history of this complaint, viz: gradually increasing indistinctness of sight since puberty. Both eyes appeared as if a drop of dew rested upon the corneæ. Their conical shape was very apparent, especially in profile view, while the irregularity of curvature of the surface showed itself in the distortion of the image of the window reflected from the cornea. The apex of each cornea was slightly clouded; beyond this, however, the optic media were perfectly transparent. The ophthalmoscopic examination in the direct image was impossible, on account of the irregular refraction. The inverted image, although not sharp, indicated no disease of the interior of the eye, which was, besides, excluded by a perfect field of vision and a perfect recognition of colors.

On account of the normal peripheral vision and the gradual accustomation to his present state, the patient could walk safely

even on crowded streets. He was, however, unable to recognize human features at any distance. Although the increased curvature of the cornea would naturally put the eye into a myopic condition, the irregularity in refraction was so considerable that sight was not better proportionately for objects close by, than for the distance. He could count fingers with his left eye at five feet distance, with his right eye at three feet. The cause of the visual indistinctness is readily understood. Since the exact focussing of rays of light entering the pupil depends in the first place on a proper curvature of the cornea, the irregularity of its surface in the present instance prevented, of course, any reunion of the rays into a single focus. When the rays of light are brought to a focus in front of or behind the retina, as in the ordinary anomalies of refraction, we can bring the focus to its proper place upon the retina by the use of correcting glasses. But in the present instance the rays were not at all united into a focal point, but scattered irregularly, and hence no spherical or cylindrical glass could be of much avail. This unpleasant but logical deduction had in fact been confirmed by previous patient, but unsuccessful attempts by other oculists. However, by shutting off the larger number of rays by the use of a narrow diaphragm, the retinal images gained in distinctness, but at the expense of the illumination. Through such a narrow opening he could count fingers at 15, and with the other eye at 10 feet distance. In fact the improvement obtained was sufficient to warrant use of a pair of opaque spectacles, with central perforation for a closer examination of distant objects, although their use on the streets would have been dangerous, on account of the narrowing of the field of vision. Close by, however, he saw no better with them, since the increased distinctness was too highly paid for by the impaired illumination. With the naked eye he could recognize large letters at the distance of one or two inches, but this was even more difficult when using a diaphragm. Neither the dilatation of the pupil by atropine, nor its contraction by eserine changed the visual acuity to any extent.

I proposed to the patient an operation, either the ablation of the conical apex after v. Graefe's original method, or the trephining of the cornea as practiced by Bowman and Wecker. But although

a good result, i. e., a return of the cornea to its normal curvature, is often obtained, a failure of the operation is by no means infrequent. The patient hence declined any surgical procedure for the present, but willingly undertook with me some optical experiments.

The refraction, which light undergoes when passing through the cornea may be expressed as the product of two factors, on the one hand the curvature of the surface, on the other hand the difference between the refractive power of the corneal tissue and of the surrounding medium, in the present case the air. Since the index of refraction of the cornea differs very little from that of water, the optical function of the cornea ceases when the eye is submerged under water. Hence we find the cornea of fishes flat, since any curvature whatever would be useless.

Physiologists (especially Czermak) have sometimes used an instrument called the orthoscope, for some optical researches. This consists of a frame, pressed watertight against the rim of the orbit with a front wall of glass, while the interspace between the cornea and the glass is filled with water. I had previously made some experiments with this apparatus at the clinic of Dr. Meyer, in Paris, but did not finish them on account of my departure. Instead of water, I made use of a fluid resembling the composition of the tears, viz: a ½ per cent solution of sodium chloride with a slight addition of gum acacia, but after all found that tepid water was equally well borne. In order to render the whole water tight, I lined the frame with a rubber tube, to serve as an air cushion. On thus submerging the cornea under water, the light passing through the water is not deviated from its course when it enters the cornea whatever be its curvature, and hence the focussing of the optic system depends on the curvature of the glass wall of the apparatus. I made use of a plane glass, but mounted in front of it the proper lens, in the present case a convex glass of 20 dioptrics (about 2 inch focus).

With these means the patient enjoyed, for the first time since his youth, a sight almost normal. At twenty feet distance he read with ease type No. 40 of Snellen's tables, while with an additional glass, convex 6, Jaeger's brilliant type (No. 1.) was read fluently (the eye being atropinized). The apparatus caused neither pain nor inconvenience to the eye, at least when in place for

half an hour. But its permanent use was forbidden by a different obstacle. The pressure necessary to prevent any leaking between the frame and the skin could not be endured for any length of time without injuring the skin, and during the few days the patient remained in town I could neither obtain nor invent any practicable contrivance.

Finding this device impracticable, I began investigating how the usefulness of a narrow diaphragm could be increased. Theory and experiment showed that the object must be: (1.) strongly illuminated (to counteract the darkening produced by the diaphragm), and (2.) brought close to the eye (because on approaching the object, its retinal image increases in size in a greater proportion than the circles of dispersion.) Both indications could be fulfilled by examining, not the object itself, but its inverted image in an astronomical telescope. By employing an objective lens of large aperture, the illumination of the image could be increased to almost any extent, its distance from the eye being of course dependent on the strength of the objective, while the proper ocular, with a narrow diaphragm, permitted an accurate perception of the image formed close to the eye.

On combining various lenses at my disposal on this principle, he saw plainly in the distance (V. $\frac{20}{30}$), and with the proper focussing read newspaper type (of course when inverted.) Reading, however, was not perfectly easy, on account of the difficulty of following the lines, and the magnifying of every tremor of the hand, still he read nearly as fluently as a normal observer. The patient, unduly particular as to appearances, hesitated however to order an instrument, none being found ready in the market, since he disliked the unavoidable inverting of the objects.

The principles, however, above mentioned, could be also utilized in the case of an ordinary terrestrial telescope, though to a less extent, but with the advantage of seeing objects erect. A small field-glass with narrow diaphragm over the ocular improved his distant vision materially, while the addition of a convex six in front of the objective, permitted at least the reading of papers.

Similar experiments can undoubtedly improve sight materially, in the more numerous cases of irregular astigmatism, in fact in any visual defect, dependant on irregular curvature of the corneal surface.

Society Reports.

SECOND ANNUAL CONVENTION OF THE AMERICAN DERMATOLOGICAL ASSOCIATION.

HELD AT SARATOGA SPRINGS, N. Y., AUGUST 27, 28 AND 29, 1878.

(Reported for the Chicago Medical Journal and Examiner, by I. E. Atkinson, M. D., of Baltimore, Md.)

SARATOGA, AUG. 27, 1878.

The American Dermatological Association met at 9:30 o'clock, a. m., at the Grand Union Hotel. Present, Drs. White, President, Wigglesworth, Duhring, Fox, Piffard, Van Harlingen, Heitzmann, Sherwell, Taylor, and Atkinson; and by invitation, Dr. Graham, of Toronto. After a short business meeting, the regular morning session was opened by the president, who briefly addressed the members, referring to the difficulties of classification and nomenclature in the study of dermatology, and the benefits to follow the labors of the committees appointed at the first meeting, to consider these subjects and to collect statistics of skin diseases in this country. The results of the labors of these committees must have an important influence in determining an improvement in the teaching of dermatology. During the year, the members of the association had actively contributed to dermatological literature, as shown by the list appended. Since the last meeting there had occurred the death of one member, Dr. Silas Durkee, of Boston. Dr. I. E. Atkinson, of Baltimore, then read a paper upon "The Pigmentary Syphiloderm." This lesion, whose existence is not generally admitted by writers, was first described by Hardy, in 1835. It has since then been very ably described, by Fournier especially. It consists in the appearance of faintly colored spots situated upon the necks of females almost

exclusively (29 times in 30). The spots are connected with each other by narrow bands of similar pigmentation, leaving small islets of normal or preternaturally whitened integument. The symptom is one of the later secondary manifestations. It is accompanied by no subjective symptoms. Neither is there any elevation of the skin, nor desquamation, nor preceding hyperæmia. Treatment has heretofore had no influence upon the lesion, which is insignificant and must often escape detection, and when seen, upon superficial examination appears more like a soiled skin than a pathological phenomenon. Dr. Heitzmann did not consider the term pigmentary syphiloderm a proper one; the "macular syphiloderm," he thought, would include all cases of this lesion, where the antecedent hyperæmia was of such transitory character as to escape observation. Dr. Duhring, while in Paris several years ago, had observed in Hardy's clinic cases of "syphilide pigmentaire," but had considered them to be not at all satisfactory, and though on the look out for it had only last year observed a case in a young prostitute, 17 years of age, in the hospital of the Univ. of Pa., which he diagnosticated as the pigmentary syphiloderm as described by Fournier, whose description he considered altogether the best—the lesion was quite different from any that he had ever before encountered. Though strongly believing this patient to be syphilitic, he had been unable to identify other syphilitic symptoms. Dr. Sherwell, had frequently seen similar cases, and considered them ordinary chloasma or as vitiligo. He had never succeeded in curing one. Dr. Fox thought an undeserved prominence had been given the lesion, but that while syphilis always precedes it he thought the true condition was vitiligo. He had already expressed his views in the *American Journal of Medical Science*, for April, 1878. Recently he had seen a mottling all over the body like a macular syphiloderm, which the patient, though syphilitic, claimed to have been present since childhood. Dr. Piffard had never recognized the lesion as an independent one. He thought probably two affections were confounded. Vitiligo may be present in syphilitics as well as non-syphilitics. He objected to the definition of vitiligo as given by most writers. Pigment sometimes returns spontaneously to the patches. Dr. Taylor, in a large number of cases, had frequently seen a pig-

mentary eruption upon the neck, but had observed no points of difference between syphilitics and non-syphilitics. He thought the Latin races more predisposed to pigmentary abnormalities and that this lesion is probably more frequently observed in them than with us. He referred to a physician whose hands were the seat of vitiligoinous patches every summer. The president considered that for the present the burden of proof rested upon those who maintained the independence of the lesion and that more extended observation was required.

Dr. L. A. Duhring then read a paper upon " A case of the so-called Xeroderma of Hebra." The patient was a young woman 17 years old, of Irish parentage, father living, mother dead of cancer, several brothers and sisters alive and healthy, no family history of consumption. This child, at the age of six months began to show upon her nose and cheeks freckles, which increased in number from year to year, and at the age of nine years were as extensive as at present. It was stated that three years ago, while employed at work with machinery, a dozen or more pinhead sized pimples came upon her cheeks and when disappearing left pock-like marks. Dr. Duhring thought this latter an accidental eruption and that the patient was probably mistaken as to their course. Within several years freckles had disappeared from the backs of the hands, leaving atrophy. Almost the whole general surface was pervaded with lentigines, telangiectases and spots of atrophy. The lentigines were scattered at haphazard, sometimes clumped. They were pinhead, but sometimes extended in almost a sheet. In color they were dirty yellow, brown or almost black. Telangiectases were scattered about, but were most numerous upon the neck and chest; they were small and ill-defined, sometimes angular or rounded, and were generally of pinhead size. They were generally inconspicuous, seldom elevated. The skin could be readily picked up. The scalp was invaded. The atrophy upon face and back of hands was noticeable, but not very conspicuous. The patient's general health was good. There were no subjective symptoms. The points of interest were, the early age of the patient when the disease began (as is usual), the slow evolution and chronic course. The atrophy was very superficial. The pigment change was the first in the train of symptoms. The telangiectasis and

freckles finally disappear, to be followed by atrophy. Dr. Duhring thought the term Xeroderma inappropriate for the phases of the disease under his observation. The discussion of this paper was postponed until after the reading of the paper by Dr. Taylor, upon the same subject. Dr. George H. Fox, of New York, then read a paper "On the proper use of the term Acne." Dr. Fox argued that the term should be restricted to inflammatory conditions of the sebaceous glands, due to disordered vascular supply arising from internal disorder. Comedo, milium, etc., he regarded as independent disorders. The term should not be used indiscriminately.

Dr. Wigglesworth, of Boston, objected to the term Acne Rosacea, where the sebaceous glands do become inflamed after long capillary congestion. But acne, in other respects, represents a pathological series, of which seborrhœa and comedo are phases.

Dr. Van Harlingen, of Philadelphia, agreed with Dr. Fox as far as concerns acne arising from internal medications, and would like to have these matters settled by a definite terminology. Comedo, he thought, had no influence upon acne, and may be independent of it. Dr. Graham, of Toronto, upon invitation, stated that he had seen cases of sycosis which he regarded as acne. Dr. Sherwell agreed that all forms should be included under the term except those arising from internal artificially-induced conditions. Dr. Piffard thought that in cases where the rosacea exists without any indication of the glands being involved, the term acne should be discarded. There are also cases where rosacea is present with acne. Dr. Fox declared that no cases of acne will occur in healthy people, and that the lesion always arises from internal causes. There is a difference between acne and rosacea, the former representing an active, the latter a passive process. A paper entitled, "A case of scleroderma, by Dr. F. P. Foster, was then read, in Dr. Foster's absence, by Dr. Taylor. A young lady with no family history of cancer, noticed an abrasion upon the nipple. It remained tender for some weeks, and an enlargement the size of a small chestnut appeared at the inner border of the gland. The breast was larger and warmer than natural; there was infiltration, but no appearance of schirrus. Gradually the parts became firmer and involved the skin. Two eminent surgeons diagnosticated schirrus. She consulted Dr.

Foster in February, 1877. The skin of both breasts was then involved, as well as a portion of the left upper extremity. She was subjected to a tonic and a galvanic treatment. Dr. Keyes concurred with Dr. Foster in the diagnosis of scleroderma. The hardness of the skin varied in degree considerably. There was a sense of constriction and shortness of breath. The entire upper half of the trunk became involved, the infiltration extending upon neck and down to left groin. Hyperæsthesia finally made thorough examination impossible. Towards fatal termination there was an irregular fungating mass in the region of the left nipple and ulcers near the navel. The infilitration involved both upper extremities. Towards the last the patient's distress was so great that as much as thirty-six (36) grains of morphia had to be daily hypodermically inserted. Dr. Heitzman thought that the author of the paper had described a case of cancer *en cuirasse*, and not a case of scleroderma. Dr. Van Harlingen did not recognize the symptoms of scleroderma in Dr. Foster's case. Dr. Taylor thought that the presence of ulceration in the case recited should not necessarily exclude a diagnosis of scleroderma, since he had seen ulceration in scleroderma to such an extent that amputation of the leg had to be performed. The president thought the case unlike scleroderma. Dr. Piffard referred to the use of hydrocotyle asiatica, mentioned by Dr. Foster, as used in the treatment. He had used it in lupus, eczema and psoriasis. Had seen lupus improve under its use, but that epididymitis had been occasioned by it.

End of morning session.

August 27—Afternoon Session.

Dr. Heitzmann then read a paper upon "Epithelium and its Performances," of which the following is an abstract:

If we watch a single living protoplasmic body, for instance, an amœba, a colorless blood-corpuscle, a pus-corpuscle, with high magnifying powers of the microscope (800-1,200) we invariably see a delicate network both within the nucleus and the protoplasm. The body is surrounded by an extremely thin, shining, homogeneous layer, and such a layer always lines vacuoles also, which temporarily or permanently may form in a creeping pro-

toplasmic body. The network of the nucleus, its surrounding shell, the network of the protoplasm and the covering and lining shells both of the body and its vacuoles are formed by the living matter, the active contraction and passive extension of which cause all changes of shape and locomotion during the life of the protoplasm.

All formations in a highly-developed animal body, being analogous to the outer covering layer of a single protoplasmic corpuscle, therefore covering the outer surface and lining all cavities within the body, which are in direct or indirect connection with the outer surface, are termed *epithelia*. Formations on the contrary analogous to the wall of a closed vacuole of a single protoplasmic body, bear the name of *endothelia*. Epithelia are present on the outer surface of the body, the skin and its prolongations, the hairs, nails, sebaceous, sudoriparous and mammary glands; on the cavity termed the intestional tract and its prolongations, mucous and salivary, pepsin, and intestinal glands and the liver; on the cavity of the respiratory tract and its mucous glands; on the cavity of the genito-urinary tract, inclusive of all of its prolongations into the kidneys, and the genital glands. Endothelia line the closed cavities of the skull and the spine, all its covering membranes, and all ventricles in the brain and their elongations into the spinal cord; the cavities of the chest, both pleural and pericardiac; the cavity of the peritoneum; all articulations; all blood and lymph-vessels, inclusive of the cavities of the heart. A thorough distinction between epithelia and endothelia, however, cannot be maintained, as there is a direct communication between both, on the openings of the uterine tubes into the peritoneal cavity; the epithelial formations of the ovaries are in no communication with the outer world, and the crystalline lens, a formation completely epithelial in nature, is covered by the endothelium of the interior and posterior chambers. Epithelia and endothelia are fully identical in this intimate structure; there exist single epithelial layers in the body, for instance, those of the bile-ducts, the uriniferous tubules; and also ciliated endothelia, for instance in the ventricles of the brain and the central canal of the spinal cord.

Epithelia and endothelia represent continuous layers of living

matter. The former are the earliest formations in a developing body, after the stage of indifference, started by the segmentation of the ovum, is passed; they form the epiblast and the hypoblast. These are invariably devoid of blood vessels and lymphatics, while all formations of the mesoblast, inclusive of its upper layer, from which arise the central nervous organs, are provided with blood vessels and lymphatics. The epithelial and endothelial layers are built up by single, polyhedral, protoplasmic bodies, the formerly so-called "epithelial cells." Each body is separated from its neighbors by a narrow cloak of a lifeless, horny cement substance, this being kindred to the basis-substance in the connective tissues. Under the microscope, we can see only the lateral parts of the cloak, which appear in the shape of a pale seam around each epithelium. The network of the living matter within the protoplasm of the epithelium, sends delicate conical offshoots through all formations of the cement substance, both in epi- and endothelia. These offshoots, up to the present time, have been termed "Thorns of Max Schultze," in honor of their discoverer (1864). That the thorns are universal formations in the cement substance, and especially formations of the living matter, thus building the bridges by which all epithelia are uninterruptedly connected, can be proved by different chemical reagents, and by the study of pathological occurrences within the cement substance, viz.: inflammation, fatty degeneration, etc. In the cement substance run the finest terminating fibers of the nerves, also in connection with the thorns, and indirectly with the net work in the interior of the protoplasm.

We distinguish mainly three varieties of epithelia: The flat; the cuboidal, and the columnar or cylindrical. Flat epithelia invariably construct the outer layers in stratified formations; cuboidal the middle layers, and columnar the lowest layer, nearest to the connective tissue. Single epithelial layers may exhibit any of the named shapes; in the uriniferous tubules, for instance, we find all the three varieties, according to the calibers of the tubules. Columnar epithelia have two subvarieties, viz., ciliated epithelium, with whip-like elongations on the outer surface, therefore occurring only in single layers. The cilia here are in connection with

the network in the interior of the protoplasm (Th. Eimer and E. Klein).

Another variety is the bacillated epithelium, where the outer surface of the cement substance is provided with numerous delicate rods, such as in the intestinal canal and the bile ducts.

All organs of the body termed "glands," are formations of the epithelium. We distinguish two varieties of glands, viz., the acinous and the tubular. A roundish elongation of the epithelium into the connective tissue forms a simple acinous gland, represented by the mucous glands of the oral cavity, the larynx, the trachea. Repeated folding up of the pouch, leads to formation of compound acinous or racemose glands, represented by the sebaceous, the salivary, the lacteal, the prostatic and other mucous glands. A prolongation of the epithelium, prevailing in the longtitudinal direction, is termed a simple, tubular gland, represented by the pepsin and the intestinal glands. Repeated ramifications of the tubules result in the formation of compound tubular glands, represented by the seminiferous and uriniferous tubules. Another sub-variety of compound tubular glands may originate by coiling of the tubule, as we see in the sweat and ceruminal glands.

The main performance of epithelium, besides the protection of the whole body, conduction of terminal nerve-fibers, therefore of sensation, etc., is the elimination of used up material from the body, viz., secretion. Every glandular formation is epithelial, and every epithelial body can be considered as a gland, inasmuch as the secretion is based upon a function of single epithelia.

There are mainly three varieties of secretion, viz., the watery, the mucous and the fatty. The watery secretion cannot directly be studied under the microscope; we only conclude by watching amœbæ fed with carmine particles, that any time, when through the visible contraction of the living matter, without the protoplasm, carmine particles are thrown out from the amœba, a certain amount of its fluid is discharged also.

A liquid, being present one time in the blood, necessarily must pass through the walls of the blood vessels and enter first the protoplasm of the epithelia, before it can be expelled from these, evidently owing to the contraction of the living network of the protoplasm. The watery secretion is performed by the lachyr-

mal and the sweat glands; the latter produce a fluid greatly varying in the amount of its solid contents and its consistence at different times. Toward approaching death of the body, the perspiration is inspissated and almost mucous in character. The inspissation of the fluid pressed out from the blood vessels of the tufts of the kidneys, is evidently the main performance of the uriniferous tubules.

The mucous secretion directly can be observed under the microscope best on minute particles, cut off from the inner surface of the small intestine of a frog, by addition of a very dilute solution of chromic acid or bichromate of potash, pure water being too rapid in its action. First we see swelling of the protoplasm near to the outer or free surface of the ephithelium. Here the covering cement substance is bulging out, and after having reached the uppermost capacity of expansion, it bursts, and a pale globular body jumps forward, the swelled protoplasm, in which no trace of the former structure can be seen. A number of such pale globules coalesce, and form the jelly like mass called mucus. At other times the whole protoplasm swells within the cloak of the cement substance, and after being freed, still shows the netlike structure of the protoplasm, or isolated granules in a lively motion, the broken particles of the former living matter. Salivary and mucous corpuscles arise from such slow action upon the protoplasm. The cloak of the cement substance, partly or totally emptied, and perforated on one end, gives the appearance of a "goblet cell." A variety of the mucous secretion is that of the stomachic juice, of the bile, and of the semen, in the latter fluid being suspended formations of living matter, the spermatozoids, a direct offspring of the epithelia of the testicles. Saliva represents an intermediate condition between watery and mucous secretion.

The third variety of secretion can best be studied under the microscope on colostrum corpuscles, which are suspended in the serous discharge of the mammary glands for a few days after delivery. Here we see the first formed fat granules still in connection with the network of the living matter within the protoplasm, and we readily arrive at the conclusion, that fat is a directly transformed living matter. During the locomotion of

the colostrum corpuscle, very often fat granules are thrown up from its interior (S. Stricker). After a few days, however, no colostrum corpuscles are secreted any more, because the living matter of the epithelia is completely transformed into fat granules, leading to a destruction of the epithelia, the granules of which commingle with a serous fluid, and form the emulsion called milk. This process of fatty change of the living matter of the epithelia of the mammary glands is a remarkably rapid one; on microscopic specimens of the breast in full lactation, we find but little protoplasm unchanged; its greatest part is transformed into fat granules, which having been extracted from the specimen with oil of cloves, leave only the shells of the cement substance behind. The highest degree of fatty change of the protoplasm is reached in the sebaceous and the ceruminal glands.

This paper was discussed by Drs. Atkinson, Fox and Piffard, the latter re-asserting his previously expressed view of the derivation of the horny layer of the epidermis from the stratum lucidum of Oehl, and claimed that the study of dermatology was not exclusively to be conducted with the microscope; that the first object of dermatologists was the cure of disease, and that the microscope is not always our safest guide in diagnosis, and that it is impossible with it alone to distinguish several diseases whose etiology is different, and whose clinical symptoms are very unlike. Dr. Heitzmann replied to Dr. Piffard's objections. The president, Dr. White, then read the report of the committee upon statistics. The committee had succeeded in bringing together, from different districts, nearly 17,000 cases of skin diseases never before reported. The report included six districts, as follows: Boston, New York, Philadelphia, Baltimore, St. Louis and Chicago, giving a total of 13,328 dispensary and 3,035 private cases. Tables of comparative prevalence of the various skin diseases were also read. There was also submitted a report upon leprosy as occurring in this country. The cases were reported from Tracadie, in New Brunswick, in the French settlement, where it has prevailed since the last century. Cases were also reported from Boston, New York, Philadelphia, Baltimore, and a series of sixteen cases observed by Dr. Geddings in Charleston. Reference was also made to cases among the Swedish

settlers of the Northwest, and to a possible colony in Minnesota (reported to the chairman by Dr. Hyde). The prevalence of the disease among the Chinese in California was referred to. Most of the cases were of foreign birth, so that the disease may be almost said not to occur with us.

End of first day's session.

AUGUST 28—9.30 A. M.

At the business meeting, Drs. E. B. Bronson, of New York, F. B. Greenough, of Boston, and G. H. Rohé, of Baltimore, were elected active members of the Association. The Nominating committee having reported, the following officers were elected for the ensuing year: President, Dr. L. A. Duhring, of Philadelphia; Vice-Presidents, Dr. J. Nevins Hyde, of Chicago, and Dr. S. Sherwell, of Brooklyn; Secretary, Dr. R. W. Taylor, of New York; Treasurer, Dr. I. E. Atkinson, of Baltimore.

AUGUST 28—10 A. M. REGULAR SESSION.

Dr. L. A. Duhring, of Philadelphia, read a paper upon "A Case of Inflammatory Fungoid Neoplasm." The patient was a married woman, 58 years old, the mother of four children, and weighing 174 lbs. Health had always been good, and catamenia, which ceased at 46 years, regular. She has had suppression of urine occasionally, and some anasarca quite often. Her mother died of cancer of the face. In August, 1876, she experienced after a cold bath, soreness and pain. Two days afterward her skin became red, and three hours afterwards wheals appeared which lasted 24 hours. Since then has had various eruptions of urticaria and eczema. Upon 10th October, a lesion, which is still present, came upon her forehead, suddenly, as a red spot, like a superficial burn; it grew, showing many variations of color. In August, 1877, it began to rise slowly, like a boil, but without subjective symptoms. In one day, nine new small tumors came upon the scalp; they were like gristle to the touch, freely moveable, and soon disappeared. Near the original patch, in September, 1877, numerous small tumors came, without subjective symptoms. In following June, also, similar tumors came suddenly upon abdomen. Later, sensitive tumors appeared upon the

groins; also, there appeared, without her knowing when, tumors upon her buttocks and back. Dr. Duhring saw her first October 25th, 1877. The previous history, as given by patient, Dr. D. thinks reliable, she being a remarkably intelligent woman. When seen by Dr. D., the lesion involving the right side of the forehead (the original lesion), was of size of a half cherry, of a raspberry color, tense, containing no pus, tuberculated and furrowed. Inside of right arm was an oval papule, dull red in color. The natural lines of the skin were exaggerated. There was another tumor in the posterior fold of right axilla. Several patches were upon the abdomen. There was a patch in the groin half an inch in height, shape of a hen's egg, and smooth. There was much dusty yellow pigmentation. On October 26th, Dr. Duhring observed a new lesion that had appeared since the night before. It was near the nipple, olive shaped, rough, of a deep, pinkish color, soft and supple—not inflammatory, not changing color to pressure. It was evident that while tumors were continually appearing, they were almost as rapidly disappearing. Some were persistent, as those upon forehead. Some lesions grew with great rapidity. The growths extended over forehead, eyebrow and scalp, both flat and tuberculated. Iodide of potash and arsenic unquestionably aggravated the disease. Some of the patches disappeared as rapidly as urticaria. One tumor upon the left cheek softened and suppurated. This tumor, after it had existed three months, was excised. Its cut surface was grayish yellow, and firm, like sarcoma. Its weight was 1 oz. The principal features of the microscopic section of this tumor, which was exhibited, was that of inflammatory round cell infiltration. The points of the case were the variety of the lesions, their number and sudden appearance and rapid disappearance, and the preservation of the general health. It was a true skin disease. The patches were of different sizes, from split-pea to size of egg, sometimes fungoid, soft or firm, lobulated and furrowed, even in the flat portions, smooth or rough, crusted or not, without symmetry. All portions of the body were invaded. The only subjective symptom was variable itching. For some time, Dr. D. was unable to name the disease, or to find record of an analogous case. Hebra has, however, described a case. Hans Hebra has

also described a case. Geber has also written an account of Hebra's case. Dr. Duhring exhibited the case to the members. The patient pointed out several large tumors upon different portions of the body, which had appeared in the few weeks interval of Dr. Duhring's absence from Philadelphia. Some of these were quite as large as pigeon's eggs, and were already undergoing involution, the process beginning in the center. A remarkable feature was the perfectly normal condition of the skin at the points where tumors had been, but had disappeared. There was not the slightest evidence of interstitial absorption. Photographs and drawings were also exhibited. Dr. Duhring regarded the affection as benignant. He thought the fluid extract of ergot had had a decidedly beneficial influence upon the growths. Dr. Piffard had seen exhibited at the N. Y. Dermatological Society two somewhat similar cases. Dr. Fox thought that milder cases of a somewhat similar affection were not seldom seen. Dr. Sherwell described a case which he thought somewhat similar, and which proved fatal. A paper by Dr. W. A. Hardaway, of St. Louis, entitled, "Treatment of Hirsuties," was then read, in the absence of Dr. Hardaway, by Dr. Taylor. In the treatment of hirsuties, the essential point being the destruction of the hair follicles, it is evident that ordinary epilation only stimulates the hair growth. To destroy the papilla, he employs a method first used by Dr. Michel for the treatment of ingrowing eyelashes—that of electrolysis. He uses by preference a Hill battery of from 8 to 20 cells, the needle, if fixed in an electrode made of a hollow bone pencil-holder—the needle-holder being attached to the negative pole—a wet sponge to the positive pole. The needle is to be inserted along the hair as far as the papillæ, and the current stopped when a slight white frothing is observed at the orifice. The hair may then be removed by epilation, and unless it comes easily, the operation is a failure. With eight elements, two to five seconds are sufficient; with twenty elements, the current is continued not more than one second. With the instrument exhibited, he was enabled to destroy 160 hairs in 30 minutes. No scar resulted. There is some pain in the operation. The needle should be the smallest cambric. Dr. H. has also occasionally employed a solution of

lime chloride 8 Gm. to 12 Gm. of water. A small quantity of this is introduced into the hair follicle with a hypodermic needle. He recommended this method when the first was not practicable. Dr. Piffard had employed a similar procedure, but yielded to Dr. H's claims to priority. He objected to introducing the needle before extracting the hair. The needle employed by him was of irido-platinum, which was stiffer than the ordinary cambric needle. He condemned Neumann's process of electro-cautery as impossible, as the circuit implies two loops of wire in the needle, without formation of large scars. He preferred a lower power and a longer time (half a minute or so) in destroying the follicle and papilla. He thought Dr. Hardaway's handle the most convenient that he had seen. Dr. Fox thought the operation more painful than stated. The needle should be as small as possible, and of irido-platinum. Platinum was not so convenient. He used four or five cells. He had been able to continue his operation for three-quarters of an hour, and finally his eyes gave out, before the patient's patience. Hairs will nevertheless frequently reappear. Dr. Piffard, in answer to the president's question, thought that a permanent cure was effected in three-quarters of the hairs operated upon at a sitting, and that it is not worth while to attack any other than large hairs like beard hairs. Ill-formed hairs appear after an imperfect destruction of the follicle. Dr. Heitzman had introduced a pin charged with nitric acid, with trifling pain, and a success of about 50 per cent. He was not very hopeful as to the permanent success of the operation. Dr. Duhring had employed a process suggested to him by Dr. Bulkley. He uses a three-cornered needle, and twists it about in the follicle. His results were fairly successful.

End of morning session.

AUGUST 28—3½ P. M.

Dr. H. S. Piffard read a paper on a "Case of Gangrænopsis." This was the case of a child one year old, treated at the Charity Hospital, New York. It was admitted April 15, with ulceration of the tongue and lips, snuffles, coppery plâques and tubercles over vulva, buttocks and thighs. The child's mother had constitutional syphilis. Mercurial treatment was ordered

for the child. Three days later a gangrenous spot one inch in diameter appeared upon left ala nasi and cheek, beginning as a small indurated nodule with an inflamed base. In eight hours it was black and gangrenous, and rapidly increasing. The mercurial treatment was stopped and quinine given hypodermically, a nitric acid wash applied, and nourishing food given. The gangrene rapidly extended, and the child died ten days from the commencement of the disease. At the autopsy the malar bone and hard palate were found necrosed, the lower lobe of the left lung was consolidated. The diagnosis was either malignant pustule or mercurial gangrene. Dr. Piffard thought the latter the true condition. Dr. Duhring reported a case of extensive sphacelus following syphilis, but probably due to mercurialization from calomel, which had been used as a dusting powder to some ulcers upon the lip, the powder probably falling into the mouth. Dr. S. Sherwell read a paper on "The use of Linseed and Oil as Therapeutic Agents in Diseases of the Skin." Dr. S. used the Indian seed pure, or administered it in a bread containing 40 per cent. of the meal with wheat flour. He had cured cases of pityrasis rubra and of pemphigus foliaceous and vulgaris. He had also seen icthyosis benefited. He thought it had a specific determination to the sebaceous glands, and of especial value in the treatment of eczema. Dr. VanHarlingen had used linseed oil, but had not been favorably impressed with it. Dr. Piffard thought he had observed good effects from its use. By consent, Dr. I. E. Atkinson, of Baltimore, then read a paper upon "The Botanical Relations of Trichophyton Tonsurans."

Previous investigations into the botanical relations of the microscopic vegetations giving rise to certain skin diseases have been fallacious on account of the faulty methods employed. Cultivations upon sliced vegetables, as carrots, apples, etc., so inevitably become overwhelmed by adventitious growths as to make a definite conclusion from them impossible. But little less objectionable are the slide and mass cultures employed by recent mycologists, since there must necessarily occur far too frequent exposures in the frequent uncovering of the objects for investigation, etc. A method guaranteeing absolute purity to the cultivation is that employed by VanTieghem and LeMonnier in their re-

searches into the mucorini. This plan is as follows: A glass ring four to five mm. in height, with an interior diameter of about fifteen mm., is fastened to a glass slide with Canada balsam. The spore to be cultivated is then sown in an appropriate nutritive fluid upon a very thin cover glass, the diameter of which is equal to that of the glass ring. The cell is then completed by laying the cover glass with the nutrient drop underneath, upon the glass ring; a few minute drops of oil upon the surface of the latter, upon which the cover glass rests, serves to protect the cell from external influences. All fluids and appliances must be as pure as it is possible to make them. This method may be called the "cell culture." In a cell like this a very small portion of hair shaft drawn from the follicle is sown, the nutritive fluid being either orange juice, Pastein's fluid, with or without sugar, decoction of horsedung, or any other approved fluid. The first two being preferable. In a large majority of cells thus planted there will be no change, some will develop bacteria, or moulds of adventitious nature. In a few cells a mode of development will take place, which is characteristic of the fungus of trichophyton, and can readily be distinguished from foreign fungus, the latter either thrusting its hyphæ under the cover-glass or developing within the cell from a single center, and readily discoverable, the mass of trichophyton spores remaining entirely quiescent. Where, however, the cultivation is a successful one, there is a simultaneous, uniform, multitudinous growth of hyphæ, accompanied sometimes by a decided swelling of the spores, which may become many times their original size; [figure shown] the latter, however, ceases as soon as hyphæ become developed extensively. These hyphæ, where the nutrient fluid is abundant, tend to form a closely meshed mycelium, and to form but few reproductive organs. Where, however, the nutrient fluid is soon used up, reproductive organs are freely developed. In all instances, without exception, these organs have been similar to those of the mucors, sporangial. In these successful cultures, adventitious fungous growths have never occurred. The fungus then, of trichophytina, is identical with mucor mucedo. The method is easily practiced, and only requires care, attention and persever-

ance, in spite of the many disappointments arising from the tendancy of the spores to remain quiescent.

Dr. Piffard objected to the process of examination as not being free from sources of fallacy.

The next paper was upon a "Case of Ulcerative Scrofuloderm," by Dr. Arthur Van Harlingen, of Philadelphia. The case was of an elderly woman, who first developed symptoms akin to eczema, but rapidly became subject to ulcerations of the general surface of a very peculiar character. Her strength gradually failed, but before death there was developed in the tongue and on the hard palate, nodules. Dr. Van Harlingen was somewhat inclined to attribute the case to a tuberculosis of the skin, but adopted the title given above. The result was fatal. Dr. Duhring, on seeing the case, was at first disposed to think it an old eczema, but the depth of the ulceration changed his mind. When he again saw the patient after a considerable interval, he was much astonished, and felt unable to decide about it. He had never seen anything like it before. He agreed with Dr. Van Harlinger as to its nature.

AUGUST 29—10 A. M.

Dr. R. W. Taylor, of New York, presented a paper entitled, "A Further Contribution to the Study of the Xeroderma of Hebra." This paper is supplementary to a paper read at the first annual meeting of the Association at Niagara Falls, Sept., 1877, a synopsis of which has already been given. Dr. Taylor has since had three of the cases under close observation, and has devoted much study to them. He was now able to report his conclusions. The lesions of this rare affection are vast numbers of pigmented spots, upon the face, neck, back of hands, forearms, breasts, and partly legs, also teleangiectases, atrophies, and new growths. The spots come and go. The course is as follows: First, the vessel becomes telangiectatic, may be in from 24 to 48 hours; the brown spots come upon the site of this dilatation, which may be linear or of various shapes; brown spots may appear, however, without the preceding vascular enlargement. The telangiectases may again come in the same spot, atrophy gradually taking place with gradual disappearance

of pigment. The essence of the disease is vascular new formation —as epiphenomena are neoplastic formations, which he thought not necessarily malignant. The tumors which are prone to occur upon the face, may become withered, were twisted off with some hæmorrhage, and healed slowly, he thought them not epitheliomatous. The activity of the disease ends in early life, but the pigmentation and atrophy are permanent. Xeroderma is a bad name, since until atrophy occurs there is no dryness. It is a vascular neoplasm, and Dr. Taylor proposed as the name for it, angioma pigmentosum et atrophicum.

Dr. Heitzmann stated that he had been the first to observe these cases. He had now a patient in whom the disease was of 20 years duration. A tumor which he regarded, had appeared, and which he had removed five times. The specimen exhibited by Dr. Taylor, from one of the tumors of the face, Dr. Hertzmann declared to be myxomatous, and would call the tumor myxo-angioma. He accepted Dr. Taylor's definition of the disease. Dr. Duhring was unable to determine Dr. Taylor's succession of symptoms in his own case. He was pretty sure that freckles first appeared exactly like lentigo. In places there were no vascular dilatations at all. He had not seen the pigmentary lesion follow telangiectasis. Dr. Taylor thought Dr. Duhring's case was too old to contradict previous vascular dilatation, as the latter had time to disappear, leaving lentigines and atrophy. Dr. Piffard thought the specimen one of malignant neoplasm, a myxo-carcinomatous growth.

The President then presented the report of the committee upon Nomenclature.

The following being recommended :

Class I. Disorders of the Glands.

1 Of the Sweat Glands.
- Hyperidrosis.
- Miliaria crystallina.
- Anidrosis.
- Bromidrosis.
- Chromidrosis.

2 Of the Sebaceous Glands.
- Seborrhœa, (a) S. oleosa, (b) S. sicca.
- Comedo.
- Cyst, (a) milium, (b) wen.
- Molluscum sebaceum.
- Diminished secretion.

Class II. Inflammations.
- Exanthemata contagiosa.
- Erythema simplex.
- Erythema multiforme. (a) E. papulatum, (b) E. bullosum. (c) E. nodosum.

Urticaria.
Dermatitis.
(a) D. traumatica. (b) D. venenata. (c) D. calorica.*
Erysipelas.
Furuncle.
Anthrax.
Phlegmona diffusa.
Pustula maligna.
Herpes. (a) H. facialis. (b) H. progenitalis.
H. zoster.
Psoriasis.
Pityriasis rubra.
Lichen. (a) L. planus. (b) L. ruber.
Eczema. (a) E. erythematosum. (b) E. papulatum. (c) E. vesiculosum. (d) E. madidans. (e) E. pustulosum. (f) E. rubrum. (g) E. squamosum.
Prurigo.
Acne.
Impetigo.
I. Contagiosa.
I. Herpetiformis.
Ecthyma.
Pemphigus.

Class III. Hæmorrhages.
Purpura. (a) P. simplex. (b) P. hæmorrhagica.

Class IV. Hypertrophies.
1 Of Pigment.
Lentigo.
Chloasma. (a) C. locale. (b) C. universale.
2 Of Epidermal and Papillary Layers.
Keratosis.
Callositas.
Cornu cutaneum.
Verruca.
Verruca necrogenica.
Xerosis.
Ichthyosis.
Hypertrophy of nail.
3 Hirsuties.
4 Of Connective Tissue.
Scleroderma.
Sclerema neonatorum.
Morphœa.
Elephantiasis Arabum.
Rosacea. (a) R. erythem. (b) R. hypertroph.
Framboesia.

Class V. Atrophies.
1 Of Pigment.
Leucoderma.
Albinismus.
Vitiligo.
Canities.
2 Of Hair.
Alopecia.
Alopecia areata.
Alopecia furfuracea.
Atrophia pilorum propria.
3 Of Nail.
4 Of Cutis.
Atrophia senilis.
Atrophia maculosa et striata.

Class VI. New Growths (benign).
1 Of Connective Tissue.
Keloid.
Cicatrix.
Fibroma.
Neuroma.
Xanthoma.
2 Of Vessels.
Angioma.
Angioma pigmentosum et atrophicum.
Angioma cavernosum.
Lymphangioma.
3 Of Granulation Tissue.
Rhino-scleroma.
Lupus erythematosus.

* These indicating affections not properly included in other titles of this class.

Lupus vulgaris.
Scrofuloderma.
Syphiloderma.
(a) S. erythem. (b) S. papul.
(c) S. pust. (d) S. tubercul.
(e) S. gummosum.
Lepra. (a) L. tuberculatum.
(b) L. maculatum. (c) L. anæstheticum.
Carcinoma.
Sarcoma.

Class VII. Ulcers.

Class VIII. Neuroses.
Hyperæsthesia. (a) Pruritus.
(b) Dermatalgia.
Anæsthesia

Class IX. Parasitic Affections.
1 VEGETABLE PARASITES
Tinea favosa.
Tinea trichophytina. (a) T. circinata. (b) T. tonsurans. (c) T. sycosis.
Tinea vesicolor.

2 ANIMAL PARASITES.
Scabies.
Pediculosis capillitii.
Pediculosis corporis.
Pediculosis pubis.

This report, after discussion, was adopted, the ayes and nays being called for by Dr. Piffard. The ayes being Drs. Taylor, Wigglesworth, Duhring, Van Harlingen, Heitzmann and Atkinson; the nays being Drs. Piffard, Fox and Sherwell. The retiring president then expressed his gratitude for the consideration shown. He believed that the success of the association had been assured by the high order of the papers presented before it, and predicated a prosperous future for American dermatology. He read by title his paper upon "A Case of Recurrent Cutaneous Hæmorrhage with Urticarial and Bullous Efflorescences." The new president, Dr. Duhring, upon assuming the chair, promised to do all in his power to promote the interests of the association, and bespoke the co-operation of the members. He indulged the hope that the ensuing year will call forth scientific research in dermatology, and still further cement the friendships of the members of the association.

The association then adjourned to meet in the city of New York upon the first Tuesday of September, 1879.

A NEW DISEASE.—According to reports from Readville, Mass., several of the operatives in a curled hair factory have died of a disease supposed to have been introduced with the hair of diseased animals, principally Siberian horses.

Clinical Reports.

NOTES FROM PRIVATE PRACTICE.

Cystic Degeneration of the Chorion.

On July 12th, 1877, I saw in consultation, Mrs. C——, aged 30, medium size; sanguine temperament. She gave the following history: married ten years; two children living, the youngest aged four years; one supposed abortion at third month, about two years before; general health good until recently. In March her menses did not appear, and she supposed she had taken cold; did not consider herself pregnant; menses did not re-appear in April; from the first she suffered from almost persistent nausea and vomiting; was treated by various physicians for "biliousness" and other vague disorders. Early in May, she began flowing, and later profuse hæmorrhage occurred and continued at intervals of a few days until the above date, the discharge consisting of blood and at times a little "watery fluid." About the middle of June her legs began to swell and the abdomen to enlarge, and she continuously lost flesh and strength. Her last physician had for some time been administering active diuretics and drastic cathartics; also tincture of iron. On examination I found her very anæmic; scarcely a vestige of color in cheeks or lips; emaciated; tongue pale and flabby; appetite poor; no nausea; abdomen enlarged and fluctuating; legs enormously enlarged, pitting upon pressure; suffering from dyspnœa especially when lying down. Auscultation revealed a very distinct anæmic murmur over base of heart and carotids. I at once proposed to the doctor that we examine the uterus; to this he objected, thinking that it was a "passive hæmorrhage." I then recommended a continuation of the iron with tonics and nutritious

diet; to discontinue diuretics and purgatives, and, since the uterus could not be examined, to await farther developments. At 8 o'clock p. m., July 26th, I was hastily called in consultation with this same physician to see Mrs. C., who at one o'clock that day had commenced having labor pains and profuse flooding, which continued during the afternoon. About one hour before my arrival, a large mass had been expelled from the womb, which nearly filled an ordinary chamber, and which on examination proved to be a vesicular mole. Its appearance is well illustrated in the figure on page 567, Thomas' Diseases of Women, third edition. Quite a quantity of cysts still remained; these I removed and administered fluid extract of ergot and whisky freely, the latter in cream.

It seemed almost impossible for her to recover from the effects of such a prolonged and profuse drain of the vital fluid, but with the exception of what might be termed hæmorrhagic fever which followed reaction, she gradually improved, and in a few weeks was entirely well. The rare occurrence of such cases, is my apology for presenting this. In conclusion I would urge the *absolute necessity* of examining the uterus when a patient comes to us with the above symptoms. How many wives and mothers may have been sacrificed to the ignorance or indifference of the attending physician?

H. L. HARRINGTON, M. D.

WARREN CO., ILLS., August 29th, 1878.

A Case of Partial Inversion of the Uterus:

Mrs. F—, German, aged 42 years, large, muscular and generally healthy, and mother of five children, was delivered of the last on the 16th of January, 1878, by a midwife. The labor was attended by no unusual circumstance, and the placenta removed without pain or delay. After delivery there was an unusually large amount of blood lost, but not sufficient to alarm either the midwife or the patient, who, although weak, was considered to be in a fair post-partum condition. She continued to have profuse sero-sanguineous discharges, became exhausted, and, in consequence, very much alarmed.

This imperfect history is all I could glean from those surrounding the patient at the time I was first called to see her, viz: the 24th of January, eight days after confinement. She was nearly bloodless, and presented all the symptoms of acute anæmia, such as languor, listlessness, despondency, tinnitus, palpitation, œdema, great pallor, rapidity and weakness of pulse, inability to move without a sense of faintness, etc. The appetite was gone, the tongue coated, the bowels were constipated, and there was an entire inability to swallow or retain any solid food. As her stomach was so weak she had not attempted to take any but fluid nourishment, hence her diet since confinement had consisted almost entirely of fennel and beef teas. The discharge from the vagina still continued, but was not very profuse.

Although I suspected some grave accident had happened to the uterus, in the presence of such an untoward condition of the patient, I determined to delay a thorough vaginal examination until I could induce a more vigorous state of the circulation. With this view I prescribed the tincture of iron and sul. quinia, internally; ordered perfect quietude, poached eggs and milk, as much as the stomach would bear, and, as soon as that organ became a little more tolerant, the tender portions of young pigeons. This course was continued perseveringly, the food being tolerated well, until January 28th, when she was very decidedly improved, although, during the few days previous, the discharge had become a little more profuse. Her pulse had gained vigor and become slower; the countenance was more cheerful, the lips more natural in color, and motion much better tolerated; she had now become hopeful, and was beginning to take an interest in her household affairs. At this visit I ventured to make a vaginal examination. I found the os uteri patulous, dilated to about the size of a silver dollar, and filled with the fundus which extended slightly below the level of the external border of the firm ring in which it was grasped. By means of one hand placed above the symphysis, while two fingers of the other were in the vagina, a cup shaped depression, showing the absence of fundus uteri, was easily recognized. There was evidently a partial inversion of the uterus present; the cervical portion of the organ was firm while the fundus and body, as well as I could determine by palpation,

were soft and impressible. Reflecting on this state of things, and believing my patient in too prostrated a condition for the manipulation necessary to restore the fundus, I was led to hope also, that if a little tone could be imparted to the fibers of the body and fundus, the discharge would diminish and possibly a spontaneous restoration result. Continuing the former supporting treatment and quietude, I administered half a drachm of Squibb's fluid extract ergot every four hours. From the time the ergot was commenced the discharge gradually became less, the fundus and body firmer, and the os smaller until the 28th of February, 1878, when the uterus was restored to its proper size, shape and position. The os was closed, the sound entered the uterine cavity three inches, and penetrated three inches into the uterine cavity by deep pressure above the symphysis, while two fingers pushed the uterus upward, the natural outlines of the fundus could be distinguished. Tonics and a nutritious diet were continued from this time forward, and were followed by uninterrupted improvement, until the patient was entirely cured.

My father, Dr. Wm. H. Byford, saw the patient with me February 10th. He fully verified my diagnosis, and coincided with me in the treatment. He also examined the patient August 16th, 1878, and assured me that the uterus was not only restored to its natural position, but was in a healthy condition.

I will not presume to make any comments on this case, as the points will readily present themselves to the reader. The only thing to which I will draw attention is the steady improvement following the administration of ergot. It is true, nature might have done all that was necessary for the restoration of the uterus without this remedy; it certainly produced no injurious effects.

In this connection it may be apropos to mention a case which was under the observation of my father where spontaneous restoration took place after the uterus had been completely inverted for fifteen years.

HENRY T. BYFORD, M. D.

Unusually High Temperature in a Case of Sunstroke.

At 3 p, m. on the 17th day of July I was called to see P. H——, a brick-yard employé. I found the man entirely unconscious, face flushed, breathing laboriously, with now and then slight convulsive contraction of the muscles of mastication, and skin dry and excessively hot—so hot that to touch him was unpleasant. On inquiry I ascertained that he had not been feeling very well all day, and about half an hour before my arrival fell down unconscious, and had been carried under the shed where I found him.

Astonished at the great heat of his skin, I determined to ascertain his temperature before carrying out the treatment I had concluded upon. While removing his clothes to get at the axilla, etc., I despatched some bystanders for a large cake of ice. I placed the thermometer in his axilla—first noticing that the mercury stood at 95°—and drew his arm firmly against the side of the body. The mercury began to rise rapidly, and in less than a minute reached the very top of the tube in the thermometer. Of course I was amazed, but there was no doubting the fact of the register. My thermometer is of the best English make, and has been proven trustworthy. It is scaled to 112°, the tube reaches a distance equal to 1° above, so that the case had a temperature marked to 113°. The rapidity with which the mercury rose to this height convinces me that the register would have been higher had there been more space for its markings. I entertained very little hope of the man's recovery. While waiting for the ice, I uncovered his body of clothing and dashed cold water all over him repeatedly, with, at first, scarcely any response from his nervous system. Soon, however, there followed a deeper and more complete respiration after each application of water. When the ice arrived I placed large pieces over the groins, in both axillae, to the sides of the neck, and embanked the head in small fragments, covered the abdomen, and in fact put it everywhere that it could be made to hold, choosing by preference such parts of the body where large blood-vessels come near to the external surface. By this means—ice and cold water—in an hour's time the temperature was reduced to 99½°. As the temperature came to 100° the man began to show more

response to irritation of any kind—he began to vomit and ejected large quantities of yellow-colored fluid. Still he showed no signs of returning consciousness other than low muttering and response to irritation, such as sprinkling water on his face. After keeping the man's temperature below 100° for half an hour, I sent him home, with instructions to have one teaspoonful of Hoffman's anodyne administered to him every hour until I saw him again.

I saw him in two hours; he was still semi-unconscious and vomiting watery mucus, yellow in color. His temperature had risen to 103°. I reapplied ice and water until he was cooled off, and ordered the anodyne continued, together with beef tea, or soups of any kind. I visited the man the next morning, found him talking cheerfully to his friends, and complaining only of headache and a little soreness of the limbs—temperature 100°. The man convalesced rapidly. CHAS. T. PARKES.

Chronic Otorrhœa; Caries of Petrous Bone; Fatal Meningitis.

Although the number of cases of death from chronic suppuration of the middle ear is already pretty large, the publication of a short report of every new fatal case may not be quite useless, in view of the fact that physicians have but just begun to realize the great danger so often connected with that frequent and commonly neglected aural disease, chronic suppurative otitis.

On September 11, 1877, H. F., aged 42 years, peddler, called at my office. He has had a discharge from the left ear fifteen years, and never thought much of it, because the ear did not ache. But for the past three days he had been suffering the most agonizing pain in the left ear and around it, so that he could not sleep nor eat. I found the ear very sensitive; the post-auricular region slightly œdematous and tender; in the external meatus some pus; farther in, its lumen was blocked by a large, soft polypus, which, on removal with the wire snare, proved to be almost of the size of a cherry, and to have sprung from the promontory with a very thin peduncle. Membrana tympani and ossicles had completely disappeared.

My first impression was that the suffering of my patient was caused by retention of pus, whose free discharge through the ex-

ternal meatus was evidently impeded by the polypus. Therefore, I expected the removal of this growth would bring quick and perfect relief. The œdematous swelling behind the ear disappeared in a few days; but the pain persisted for two weeks; the suppuration did not abate to any appreciable degree, and a cautious examination with a probe of the place where the polypus originated, revealed extensive caries, and extreme sensitiveness of the bone. On the 1st of October the patient was free from pain, but complained of dizziness and a strange, heavy feeling in his head. Nevertheless he was determined to go into the country on some business. I tried to persuade him into a change of mind, because I apprehended serious complications. But he left the city on the next morning, and, as I was recently informed, died of meningitis two weeks afterwards.

CHICAGO, September, 1878. F. C. HOTZ.

VOMITING during anæsthesia produced by ether is so common an occurrence that we are liable to overlook the dangers which may attend it. A recent issue of the *British Medical Journal* contains the account of a lamentable case in which vomited matters found their way into the trachea and lungs and rapidly caused fatal asphyxia. The trachea was opened, but all efforts to save the patient's life proved futile. Suffocation from this cause is very rare, but it is well for us to be fore-warned of the possibility of such an accident.—*Cincinnati Lancet and Clinc.*

ETHER V. CHLOROFORM.—From the annual report of Prof. Bardeleben's clinic in Berlin, for the year 1876, we learn that death from chloroform occurred in that year four times among twelve to fifteen hundred narcoses. In all four cases a small amount of chloroform was used when death occurred. These accidents as well as an exceedingly large number of troublesome narcoses caused the professor to abandon chloroform and to use chloral-chloroform and ether. All narcoses since have been free from complications.

Correspondence.

RIZZOLI'S OSTEOKLAST — HEGAR'S OPERATION FOR FIBROID OF THE UTERUS— AKYSTOPEURASTIC.

MUNICH, August 1, 1878.

Editors Chicago Medical Journal and Examiner:

In my last letter I described Ogsdon's operation for genu valgum, and reported a case operated upon by Prof. Von Nussbaum. The result, as in all previous cases, has been perfect. The limb was retained in its normal position with a straight splint without any difficulty; no fever followed, and the pain was inconsiderable. Passive motion was made twelve days after the operation, and repeated daily. Subcutaneous osteotomy, for correcting angularity of long bones, has been entirely abandoned here, and osteoklase with Rizzoli's instrument has been substituted. During this session Prof. Von Nussbaum has made numerous experiments with this instrument on cadavers; all of them have proven: 1, any of the long bones can be fractured; 2, the fracture takes place at the desired spot; 3, the operation produces a simple fracture, without any serious complications. To avoid injury to the vessels the fracture must always be made in the direction of the deformity, and the limb straightened gradually and carefully.

This instrument was used on a little girl with outward curvature of both legs. Both legs were fractured. The fracture took place with a loud snap. The limbs were placed in the natural position and a plaster-of-Paris dressing applied. No reaction took place—the patient made a favorable recovery.

In ovariotomy operations, the pedicle is secured with two or more stout catgut ligatures, and always left intra-peritoneal. If the pedicle is large it is tied in two or more parts, and to give additional security in preventing secondary hemorrhage, the large vessels are separately ligated with catgut at the cut end of the stump. No drainage tubes are employed. Of the three operations which I saw, all concerned patients, between 30 and 40 years of age; tumors, simple cysts; in one case extensive adhesions—they all recovered; only one presented slight evidences of peritonitis. Prof. Von Nussbaum believes that the peritoneum is not liable to inflammation, provided it is not exposed to infection, hence the importance of opening the peritoneal cavity under the antiseptic spray.

Another very important item he considers to be the employment of artificial heat during the operation. The room is thoroughly disinfected with carbolic spray an hour before the operation, and the temperature raised to 75° to 80° F., vessels with hot water are placed near the extremities and body of the patient, the carbolic acid solution for the spray and for cleansing the wound must also be warm.

As the peritoneum is one of the most active absorbing surfaces for infectious matter, all operations which necessitate its exposure should be carried out on strict antiseptic principles.

Hegar's operation of removing both ovaries for fibrous tumor of uterus has been performed here three times. The principle of the operation consists in anticipating the climateric period, and by arresting the physiological congestions of the organ, arrest the morbid process, and render the tumor amenable to absorption. One of these cases proved successful. The patient had been so much reduced by profuse hæmorrhages that she was confined to bed. The tumor was large, involving the greater part of the uterus. Both ovaries were removed, through a small incision in the linea alba. She recovered rapidly, and after the lapse of nearly a year the entire tumor had disappeared. I witnessed only the last operation. The patient was about 40 years of age. The tumor had existed for many years, causing, the last few months, serious loss of blood. She has suffered on several occasions attacks of severe pain, indicating the existence of

previous pelvic peritonitis. Attempts had been made to promote the absorption of the tumor by the introduction of sponge-tents through the cervical canal. but were always followed by symptoms of inflammation, consequently they had to be abandoned. As a last resort it was decided to perform Hegar's operation, as the only chance to save her life. A small incision was made in the linea alba, half way between the pubes and umbilicus, where the upper margin of the tumor was found. The tumor was connected to surrounding parts by adhesions, and the peritoneum showed signs of recent inflammation. The incision was enlarged to the umbilicus, and the right ovary brought forward and removed, after ligating its pedicle firmly with catgut. The left ovary was found intimately connected with the surface of the tumor; in order to reach it a lateral incision had to be made. The whole ovary could only be removed after a very tedious dissection and application of numerous ligatures. The wound was closed with silver wire and catgut sutures, the whole operation having been conducted on strict antiseptic principles. The patient rallied from the operation, but died thirty-six hours after from peritonitis. What had rendered the prognosis very unfavorable in this case were the firm adhesions of the left ovary and the existence of recent pelvic inflammation.

Akystopeurastic is a term introduced by Middeldorpf for designating a new method for exploration. The instrument employed is a long, slender needle. It is applicable, in the first place, as the most reliable means for ascertaining the existence of death. The needle is thrust into the chest, between the fifth and sixth ribs, so as to come in contact with the heart, or enter its substance; if life is not extinct the end of the needle will move synchronous with the heart; if death has taken place this motion will not be observed. It is likewise an important adjunct for diagnosing dislocations. In a doubtful case of injury of the shoulder joint the needle can be pushed below the acromion process toward the glenoid cavity; if the bone is not dislocated, it will meet with resistance on part of the head and neck of humerus; if dislocation has taken place, it will enter easily and meet with no obstruction until it comes in contact with the

glenoid cavity. Simple as it is, this method will prove to be a valuable aid in surgical diagnosis.

Chronic varicose ulcers are treated as follows: The ulcerated surface is made aseptic by the application of an 8 per cent. solution of chloride of zinc, and covered with wet borax lint and gutta-percha tissue. As soon as healthy granulations make their appearance the surface is covered with dry borax lint, without the impermeable covering. The result of this treatment has been very beneficial.

This week the present semester will close, and with it the most interesting surgical clinics of Prof. Von Nussbaum.

I have seen so many valuable things in his practice that it would be impossible to communicate them all within such a brief space. They can only be appreciated by those whose fortune it is to witness his operations.

As a practical teacher and original thinker he has certainly no equal.

In my next communication I will attempt to tell you something of the remaining teachers and of the merits of this school.

Very truly, N. SENN, M. D.

To the Editor of the Chicago Medical Journal and Examiner:

One of your correspondents, "E. Ingals, M. D.," in an article in your September number, in which he arraigns a goodly number of the medical profession of this city for alleged violation of the medical code, says:

"An advertisement appears day after day in the most widely circulated papers of Chicago, signed by more than a dozen well-known physicians of the city, who have united in the Herculean task of informing a distressed and waiting public of whom it may purchase a pair of spectacles."

Can this be so? Did the Doctor read the advertisement correctly? Did he put on *his* spectacles? Or, is the defect at the *other end* of his optic nerve? What are the real facts about this famous advertisement? Simply these:—A clever artisan pub-

lishes in the daily papers his business card, in which he states that he is recommended by certain gentlemen, giving their names, and appending, on his own responsibility, their titles and public position. *This is the whole case!*

Now, as my name is in the list, I desire to say that I hold myself strictly amenable to the code of ethics adopted by the American Medical Association, and I defy your correspondent to cite a single section of that code, the letter or spirit of which I have violated. But I suspect that the doctor has read the code about as intelligently as he read the advertisement which has disturbed him so much, and against which he has done such Quixotic warfare.

MOSES GUNN.

CHICAGO, Sept. 6th, 1878.

Editor of the Chicago Medical Journal and Examiner:

I must confess to a feeling of disappointment as I concluded my perusal of the correspondence in the last number of the CHICAGO MEDICAL JOURNAL AND EXAMINER. Glancing down the pages occupied by your distinguished correspondent, I was anxiously looking for something that should make me feel "the crimson in my cheek;" and, at last, I thought it was really coming, as the wonderful advertisement of the surgeon-dentist began to unfold its "lingering length" before my view. Now for a spicy narrative of a convulsion in the British Medical Association, I thought. I expected to read of nothing less than the death of the venerable Dr. Heberden, occasioned by mortification at sight of the name of John Hunter in the advertisement of a quack. Undoubtedly, we should be told of an outbreak of acne rosacea upon the proboscis of Sir Charles Bell, excited by a violent determination of "crimson" to the part. Beyond all question we should be informed of the manner in which Sir Astley Cooper and Mr. Abernethy took measures to punish this "offense to the (*sic*) honor and dignity of the medical profession" by getting up in the College of Surgeons, "demanding an explanation," and moving a reference of the case to the Royal Society of London, and to the Academy of Sciences in Paris.

But, "oh, most lame and impotent conclusion!" there was nothing of that sort; and I was compelled to lay down my journal with the conviction that if Dr. Heberden and Dr. Bell, and Messrs. Cooper and Abernethy ever cared to notice the document in question, they could only have smiled a little at the ingenuity of an enterprising dentist, and then calmly resumed those studies which have made their names immortal.

Allow me to suggest that if some of your correspondents would keep their minds as seriously occupied as these our predecessors did, they would find no leisure for the work of magnifying mole-hills into mountains, nor feel tempted to violate the code of ethics by thoughtless—let us hope unintentional—misrepresentation of their best friends. As for the allegations of your correspondent, it really is not worth while to take the time of your readers by a formal exposure of their utterly subjective origin and character.

HENRY M. LYMAN.

HEALTH OFFICE, HYDE PARK, Aug. 23, 1878.

Editor Chicago Medical Journal and Examiner:

The following sections of a revised ordinance, passed by the Board of Trustees of Hyde Park, and which went into effect on the 27th day of August, 1878, will be of interest to the physicians of Chicago and vicinity, and for that reason I send them to you for insertion in the JOURNAL, as the most convenient and sure way of reaching them.

"SECTION 10. Every physician, midwife, or other person who may professionally assist or advise at any birth or death, shall make a return of such birth or death to the health department of this village, such as now required by the State Board of Health to the county clerk. Said returns of births shall be made to said health department within four days after the date of such birth, and returns of deaths shall be made to said health department within twenty-four hours after such death may occur. It shall be the duty of said village physician to transmit the returns of births and deaths aforesaid to the county clerk within the time now prescribed by law.

"SECTION 11. No remains of any human being, having died within the corporate limits of the village, or whose body may be found within the limits of the same, shall be removed from this village for interment or otherwise, nor shall said remains be interred within the corporate limits of Hyde Park, until the certificate, as required in section 10 of this chapter, shall have been filed at the office of the health department, and a permit first had and obtained for such removal or interment."

It will be seen, by a noncompliance on the part of attending physicians upon their late patients, that the friends of deceased will be put to no inconsiderable trouble before interment can be had, as no interment can be obtained within Hyde Park of such deaths as may occur within the limits of the same until a *burial permit* be had, and no such permit can be had except on the death certificate of the attending physician, or the finding of a coroner's jury, as the case may require.

If physicians whose patients die within the limits of Hyde Park, and whose friends wish to inter them at Oakwood Cemetery, will please bear this in mind, they will save the friends of the deceased much trouble by promptly making returns of such death, as required above.

J. RAMSEY FLOOD,
Health Officer, Hyde Park.

IN the *White Mountain Echo*, of Sept. 7, 1878, we find recorded the proceedings of the United States Hay Fever Association, convened at Bethlehem, N. H., in the very heart of the White Mountains. The perusal of these pages is sufficient to move any one to—a sneeze. "O, ye tears,"—but stay—this is the month of October.

PHIMOSIS AS A CAUSE OF HERNIA.—In the examination of 51 children affected with congenital phimosis, Kempe discovered that 31 had hernia; five, double inguinal; a few, umblical. None suffered at birth, and the tighter the preputial stenosis, the earlier the hernia. All were relieved by circumcision; in five, the latter operation relieved the hernia.—(*Lancet, July*, 1878.)

Editorial.

THE LATE AGITATION ARISING FROM AN ADVERTISEMENT.

Members of the profession in Chicago have lately been very justly excited by the appearance in the daily papers of an advertisement which contained the names of a number of leading physicians of the city. To the names of these gentlemen were appended the professional and other degrees to which they were entitled, such as "A. M.," "M. D.," "Professor of———in——— Medical College," etc. The advertisement in question was written with so much skill as to make it appear that a large number of the professors in the medical colleges of the city, had ornamented their own names with the honorary appendages which they happen to possess. In order to emphasize the perfection of the articles advertised and recommended by the distinguished gentlemen who appeared to be his patrons, the author of the advertisement had it placed on the first page of the most extensively circulated daily journals, with a wood-cut at the top, so prominent as to preclude the possibility of its being overlooked by the most careless observer. This figure and long array of professors' names, made it the most conspicuous and attractive advertisement in the paper, and it doubtless served its purpose admirably. Immediately upon its appearance, and indeed very naturally, there was a free expression of surprise and indignation in medical circles. It was surprising that men of acknowledged merit and recognized position should lend their names to such a cause, and should in such ostentatious manner parade their titles before the public in connection with a subject that had no relation to the advancement of the welfare of the profes-

sion. The younger men were very properly indignant that their trusted seniors had violated the code of propriety, in so flagrant a manner.

The Chicago Medical Society took the initiative in passing resolutions requesting the erring ones to explain their position in the question at issue. Some responded to these resolutions, giving such explanation as seemed to them suitable to the occasion; others, however, did not think it necessary or proper to make any such response. The society after much warm discussion, exonerated from intentional wrong some of those who had offered explanation, and afterward indefinitely postponed consideration of the entire subject. No specific charges were made against any one, consequently no effort was made to administer discipline.

It is right that the profession should have a explanation of this disagreeable affair, that will enable those who desire it to avoid such unseemly and offensive publicity in future, and that will offer to those who feel most aggrieved at least an excuse for the apparently inexcusable facts. An optician who had recently established himself in Chicago, determined to convince some of its leading citizens that his work was greatly superior to anything heretofore offered to their inspection. Whatever the main fact may be, he succeeded by a painstaking exhibition of his wares and apparatus for making and adjusting his glasses, together with certificates of approval from many eminent politicians, lawyers, and physicians throughout the country, in making many of those who called upon him believe that he understood the subject upon which he was talking, and was an enthusiast in his calling. When he thought he had succeeded in proving the superiority of his wares to the satisfaction of his hearers, he would very politely request them to say so in writing. Those who complied with this request signed a note to that effect by appending their names. We believe in no instance was any degree or professional title found afterward attached to the names of such signers, nor was any verbal or written authority given for their subsequent use. We do not believe that any of the professional gentlemen concerned, knew to what use these signatures were to be put. We are furthermore certain that some of the signers at least, would never have consented to such ostentatious parade

before the public. The whole thing was managed most skillfully. There was no formal certificate to which the signatures were attached. The formidable and captivating array of names, degrees and titles was simply headed, "recommended by."

When the attention of the signers was called to the subject, some were willing to justify themselves by the reflection that the act was not in violation of medical ethics, and that it was nothing more nor less than a recommendation to the public of the work of an accomplished and enterprising mechanic, while others felt unable to justify themselves upon any other grounds than that they had been imposed upon by the advertiser, who had presumed to do in their names all that was unseemly and offensive to professional propriety.

Such instances of involuntary participation in offensive advertisements have, however, been of too frequent occurrence lately to be easily excused, and, as there is no redress after the matter has once received the finishing touch of an artistic manipulator, the profession has a right to demand that its members see to it in future that they be not outwitted by men in search of influential names with which to forward their individual interests. The impression produced by this unfortunate occurrence will not be lost on members of the profession here, who not only desire to be right, but who wish to avoid all appearance of wrong; and we venture to hope, indeed we confidently believe, that they will never be outraged in this way again.

Upon another page of this number will be found communications from two of the gentlemen to whom reference was made by a correspondent in our last issue. In a spirit of impartiality we have thus given space to representatives of each side of the question at issue, for an expression of opinion. No further discussion of the subject will be conducted in these columns, as we consider that whatever good might have been the result of such discussion, has been already accomplished.

THE SECULAR PRESS ON THE TREATMENT OF YELLOW FEVER.

We have not been surprised to notice in the columns of the daily press, criticisms upon the method and apparent want of success of the treatment pursued by our medical brethren, who are heroically contending against the epidemic of yellow fever in several of the Southern States. These criticisms have elicited, in one instance at least, a protest on the part of a well-known physician of this city, which has been accorded that degree of reserved acceptance usual in such cases. Daily journals are not given to unreserved acknowledgment of error. Their presses, like the king, "can do no wrong."

We say that we have not been surprised, simply because every intelligent man has learned the exact value of newspaper editorial opinions in this country. Upon any subject whose essential facts are recorded in text-books, census and government reports, biographies, and encyclopœdias—the average library of the "sanctum"—these writers speak by the card. In the small hours of the morning, when presses are already in motion, boys calling for "copy," and a thousand readers are waiting for an edition, the results of a superficial reading upon any given subject, dressed in the English of the average penny-a-liner, are often really surprisingly clever. He, however, who has completely mastered any subject thus discussed, smiles at the inaccuracy of the premises and the feeble shallowness of the conclusions reached.

They do these things differently in England. There, editorial articles (generally called "leaders") are carefully written, often weeks in advance, by men who have been specially prepared by years of study in the department alloted to their charge—men who often live at a distance from the metropolitan centers.

What we have to say upon the subject of yellow fever is already known to the world of science; it is well, however, to occasionally recite old truths.

Physicians are called to encounter three classes of disease; first, those which terminate favorably without human intervention; second, those which terminate fatally if neglected, and favorably if judiciously treated; third, those which terminate fatally in any event. Some diseases exhibit varieties in each class. Such a disease is yellow fever.

Mild cases of yellow fever, terminating favorably without medical treatment, occur in this as in all other epidemics. The fact is often best illustrated in the phenomena of the malady displayed in the negro race, though by no means confined to this class. Naturally these cases attract but little attention in the public press.

Other cases there are which, under almost any wise and judicious treatment, go on to recovery. Strange as it may sound to those unfamiliar with the facts, these cases outnumber all others, except in the very foci of contagion, and in the most malignant of epidemics. This year they can be numbered by the thousand, but patients in complete convalescence possess no interest in the eyes of the average newspaper writer and newspaper reader. It is the house which is in process of demolition that attracts the crowd, not the structure that is in building.

Nor is the treatment of these cases essentially peculiar. The principles of treatment which we recognize as based upon a sound pathology and large experience, will guide almost any judicious practitioner in the right course. There is no cast-iron rule for such cases. With a mortality of ten or fifteen per cent. of all patients seized with the malady, it is evident that some latitude can be allowed to those who are fitted by skill or experience to deal with the plague.

Lastly, there are the cases in which treatment is of no avail, and under any aspect, the issue of these is terrible. Patients of this sort are hopelessly doomed from the instant of attack, and the attack is remorselessly swift and direct. Any treatment worth the name, should have equal swiftness and intensity, but while the world lasts, none such will be found. For patients of this class are either, at the outset, stricken down with the virulence of the malady or, having been gradually and insidiously poisoned till the point of saturation is reached, they suddenly succumb.

The so-called "walking cases" are to be explained in this way, those in which a man who is engaged in the street, or in the counting-room, unexpectedly ejects black vomit and dies. Even in such persons, however, a skilled eye can early recognize symptoms of a formidable and even of a fatal character, which elude the observation of the less vigilant. Their hour of actual dissolution may be deferred for a brief space of time, but they are nevertheless dying at the earliest onset of the malady—death is occurring at the kidneys, whose function is suspended so suddenly that no opportunity is given for the usual protest of nature; it is occurring in the saffron-tinted skin, which often assumes the peculiar hue suggestive of incipient moist gangrene—it is occurring at the stomach whose black ejecta (even including the so-called "flies' wings" appearance), can be seen occasionally in other diseases of rapidly fatal prostration. In short, what typhoid and typho-malarial fevers can accomplish in weeks, yellow fever can accomplish in as many minutes.

When the heart of a man is perforated by a bullet, no one expects the surgeon to "cure." When a despairing wretch has swallowed a dose of strychnia, and the deleterious drug or its newly-formed compounds, have been absorbed from the stomach, society exonorates the physician from a share in the fatal result. If the bullet spare a vital organ, if the poison can be reached by pump or antidote, a responsibility is incurred by the practitioner.

But even surer than the bullet or the chemical salt is the intensest poison of yellow fever when it has once gained access to the human economy. Its full possession of the system is equivalent to doom. In such a person medical skill is utterly helpless.

We who write these lines know whereof we are writing. We have been in the midst of an epidemic, watched its career, despaired over its victims, saved those that were savable, received its foul ejecta in the face, and made post mortem examinations of its dead. We are not, therefore writing in the phrases of the press-room, but in the language of experience.

What medical skill can do in other morbid states of the human economy, that it can, and actually does accomplish in the treatment of yellow fever. What it can not do, when a ball has pierced the brain, a virus permeated the blood-mass, that it cannot

do in yellow fever. Yet in the one case the newspapers complain and in the other they do not.

The search, nevertheless, for the philosopher's stone, the elixir of life and the drug that can work miracles, will be continued. The greatest sinner in his moment of penitence can be shrived by the word of a priest. Why then cannot a man put a pill into his stomach that will absolve him from the consequences of the poison he has ingested, absorbed or inhaled to his mortal hurt? This is the argument of the world.

We know it cannot be done. We of the medical profession, who have studied, observed, reasoned and refused to believe in modern miracles, know that no plant that grows, no mineral in the earth, nothing that burrows, flies or swims, will ever give absolution in these cases. A larger knowledge may enable us to push the advanced line of savable cases further into the domain of the unsavable; it may give us a better prophylaxis. But while a man will burn his hand who holds it in the fire, so long will human life shrivel like a dried leaf in the full breath of this pestilence.

Our medical brothers in the South have built for themselves a monument more enduring than brass. Of the lives saved by their self-sacrificing devotion, there is no human record. Many of them have set on high before us an example of sublime heroism which can never be lost.

THE ROLL OF HONOR.—The following is an incomplete list of the noble dead who have fallen in the battle against yellow fever in the South: Drs. Chas. Gallagher, Herndon, B. W. Avant, Woolfolk, Chas. Bonner, Catlett, T. L. Bond, Menees, J. R. Renner, Jno. B. Hicks, Lehman, Jno. Erskine, Cage, McGregor, Blanton, Milton, Hawkins, J. S. Bankson, W. W. Hall, Hughes, Gillespie, E. J. Hughes, May, F. Sarner, J C. Rogers, Hopson, K. T. Watson, W. R. Hodges, T. M. Dickinson, R. B. Williams, Mead, Booth, P. F. Whitehead, J. G. Byrne, Nathan McGee, J. E. Penn, M. J. McKee.

Reviews and Book Notices.

LECTURES ON CLINICAL MEDICINE. By Dr. M'Call Anderson, Professor of Clinical Medicine in the University of Glasgow. London: Macmillan & Co., 1878. Chicago: Jansen, McClurg & Co.

The author, in this volume, has thrown together, in a small compass, much of what has been the result of considerable experience, reading and reflection. It consists of seventeen lectures on topics of surpassing interest to the medical practitioner.

A clear and faithful exponent of his subject, the writer presents it with perspicuity; not discolored by some pet theory, nor influenced unduly by any prevailing fashion of thought. This little work is quite *au courant* of the most advanced medical literature; for whilst the author avails himself of the learning of such men as Graves, Watson and other eminent cultivators of medical science, belonging to an age, now nearly passed away, he loses no opportunity of profiting by all that is new and progressive in science. He therefore fairly estimates such advantages as we are supposed to derive from improved instrumental appliances in guiding us to a correct diagnosis; and gives us the result of his experience as to the worth of new modes of treatment. As we read each case, his style is so simple and invested with such an air of candor, as to invite confidence even from those who are disposed to scepticism, in these times when theories are so often rashly formed, and readily pass from speculation into practice.

We propose now to give a general sketch of Dr. Anderson's work, and whilst passing in review the chief subjects of which it treats, we regret that neither time nor space will permit us to dwell on them to the extent each is so justly entitled. We must

therefore limit ourselves to a very brief notice of some; and select for a fuller consideration, others, that just now engage more especially, the attention of the profession.

The first lecture is introductory. In this he shows how important clinical teaching is in making skillful and successful physicians. How, without it, the mere reading of systematic works can never reach this result; and that a chief cause of our ranks being thronged by incompetent men, is, in a great measure, due to the neglect and inefficiency of clinical instruction. In this chapter he enumerates many of the aids we derive in treatment from the simple application of cold in fever and in localized inflammation. When alluding to the cold bath, in enteric fever, he graphically describes his feelings, when for the first time, he had recourse to it as a remedy.

"I must confess," he writes, "that on the first occasion on which I used it, it was with fear and trembling. The first case in which I tried this treatment (a case of enteric fever), was a most unpromising one. The patient, a young female, had a temperature varying from 104° to 105.4°; a pulse of 134; respirations, 48. She was delirious, bordering upon insensibility, in a state of great prostration, with profuse diarrhœa, and with very pronounced congestion of the lungs. Before leaving the bath, her temperature had fallen to 101.3°, her pulse to 120, her respirations to 42. Her delirium was gone, her cheeks less flushed, and she expressed herself as feeling more comfortable. From this time onwards, all the distressing symptoms rapidly subsided, and she made a perfect recovery."

With the same object he advises the application of iced cloths. In this we ourselves, after a struggle with long-established and deeply rooted prejudice, now, from the experience of the last year or two, fully concur. He gives a case in which congestion and tenderness of the liver was thus treated by the systematic application of iced cloths to the hepatic region for half an hour three times daily, and in which the result was, as he expresses it, "magical." No blue-pill, no cupping, no leeches, nor blistering, but the simple application of cold. This treatment we have fully tried with the same favorable result.

The second lecture consists of "Cases illustrative of pain as a symptom of disease." In this he impresses on the class the circumstance that the significance of this symptom is "exceedingly varied, and that we must endeavor in all cases, if possible, to ascertain the nature of the morbid state of which it is the ex-

pression, before devising measures for its removal." But that there are some cases in which it is not possible speedily to ascertain this, must be consonant with the experience of every physician; and too strict a compliance with the rule would often be attended by unnecessary suffering to the patient. Still, we must not, from this observation, be supposed as endeavoring to invalidate a sound principle of practice. For in all cases we should investigate and try to ascertain the true meaning of pain, no matter from what part it may proceed, just as we would interrogate the abnormal functions of any organ, with the view to ascertain the relation that the derangements of the former bear to the latter.

The third lecture is devoted to cases illustrative of gastric and cerebral vomiting. In this he contrasts their distinctive features and presents two cases as types of their respective kinds. The eighth and ninth lectures are of paramount interest and importance. They are models of excellence in clinical teaching. The subject of both is the "Treatment of aneurism of the aorta." Cases of such are graphically related, followed by comments clear and condensed. In the treatment, the author deviates, not unjustifiably, however, from what has been the routine, but we must add, hitherto unavailing practice in a large majority of instances.

Our readers may remember that with Morgagni commenced the era of clinical teaching of aneurism of the aorta. For though the credit of distinguishing the disease in the living subject, and proving the correctness of the diagnosis by subsequent autopsy, belongs to Vesalius, who wrote in 1557; yet more than a century elapsed before Morgagni considered the subject in the more copious recital of facts; in his clearer views respecting the nature and mode of formation of aneurismal tumors; in his exposition of the morbid changes of the vessel inducing them; in his demonstration of the many and varying manifestations that arise from their compression of surrounding parts; and in his accuracy in the enumeration of their several terminations. Since then, Scarpa, Corvisart, Lænnec, Bouillaud, and Hodgson have contributed, each his share, to throw light on a subject that had been so little understood that Riolan, in 1658, declared that

aneurism could not affect the aorta, owing to the thickness of its walls, and Elsner, in 1690, when writing of a case of aneurism of the aorta, refers to it under the head "De paradoxico aneurismate aorto." Still, nearly half a century ago, previously to the writings of Stokes, Greene and others of the Dublin school, clear and distinct views derived from anatomy and physiology were not generally held on this disease; so much so, that we can remember when a correct diagnosis of aneurism of the aorta was considered among the especial difficulties of practice. At present, what a marked contrast! What aids we acquire in closely observing pathological phenomena, as in the progress of the affection, the tumor extends, and comes into close relation with surrounding parts! Here our knowledge of anatomy and physiology enables us to grasp every indication presented, as each organ in turn invaded by the tumor supplies us with varying manifestations progressively developed.

Aneurism of the aorta arises most frequently at the origin of that vessel, and here it is in relation with the heart itself. It may compress the auricles, the pulmonary artery and the superior cava; increasing, it presses on the trachea, the bronchi, the œsophagus, the pneumogastric, and the recurrent nerves, particularly the left recurrent. Coming forward it perforates anteriorly the thorax and appears externally. It may perforate a lung, or open into the cavity of the pleura. As each function is interfered with, symptoms arise, whether as regards the viscera, the circulation or the nerves, the import and interpretation of which must be determined by our knowledge of the structure and functions of the organism. It must not be supposed that the disease terminates, after perforating the thorax, in hæmorrhage, in the majority of cases. Asphyxia is the most common cause of death. When aneurism of the arch of the aorta presses on the bronchi, trachea, on one of the lungs, or on the pulmonary artery, this most likely will be the result. After asphyxia, hæmorrhage is next in the order of frequency; then inanition by compression of the œsaphagus; gangrene of the lung; paraplegia and sloughing of the sacrum from pressure on the spinal marrow or softening of the brain by obliteration of the carotids, or finally by mere exhaustion. However, without

further preliminary remarks, we will let the author speak for himself:

"On the 11th October, 1873, there was admitted into the Royal Infirmary, a man who was about 34 years of age. For the last four years he has been a French polisher, but previously to that time he was a joiner, and was frequently required to lift heavy weights. His diet has always been good, and his habits temperate. He has uniformly enjoyed good health, and has had neither rheumatism nor syphilis. About three years ago he began to complain of palpitation, especially on exertion, and 21 months after this, while attending his wife, who was laid up with fever, he experienced a sharp pain in the left breast, which extended into the left shoulder and down the arm. On account of these symptoms, he entered the infirmary on January 11th, 1873, and was said then to be laboring under dilated hypertrophy of the heart. Under the influence of rest, tincture of veratrum viride in 5-drop doses, and syrup of the iodide of iron, he improved considerably, and was dismissed on March 29. For four months after this he continued in tolerable health, although he suffered at intervals from the palpitation and pain; but about three months ago he observed that he was becoming hoarse, and since then the hoarseness has gradually increased, although it never amounted to aphonia. About this time, too, he commenced to complain of attacks of dyspnœa, coming on for the most part when speaking or walking rapidly, and giving rise to a feeling of suffocation referred to the region of the larynx. For some months also he has had a short, dry, somewhat hollow cough, unaccompanied by expectoration. About five weeks prior to admission, a pulsating tumor was detected by a medical man in the jugular fossa, but for a couple of weeks before this he felt a beating above the breast-bone. When the tumor made its appearance, the palpitation and pains in the chest subsided. When first discovered it formed a well marked prominence at the root of the neck, was about the size of a hen's egg, and was tender to the touch. After the appearance of the tumor, some difficulty of swallowing was experienced, and he had the feeling 'as if the food was going the wrong way.' This symptom has latterly in great measure disappeared. He does not sleep well at night, which seems to be due to the pulsation in the tumor. He perspires freely, has been losing flesh rapidly, and frequently changes color. Tongue moist and slighted coated, appetite variable; bowels uniformly costive; pulse 66, natural; temperature, 98.4°." "On uncovering this man's chest, and placing him upon his back, a distinct swelling was observed at the top of the sternum, and inclined a little to the left side—a swelling which was not very prominent, but which occupied an area about equal to that of a hen's egg. It was to the eye a distinctly pulsating swelling; and on applying the hand, it was found to be very soft, and not only the seat of pulsation, but also, what is a very characteristic symptom, of expansion, and each time the ventricle contracted a distinct vibration was experienced—'purring tremor,' as it is called. On percussion, there was well marked dullness, not only over the tumor, but also over the upper part of the manubrium sterni, and extending a little into each subclavicular region. On

applying the stethoscope a loud, rasping, systolic murmur was heard over the tumor. It was also heard over the whole of the chest in the vessels of the neck and arms, although more markedly in those of the right than in those of the left side, and in the thoracic and abdominal aorta, but it was inaudible in the femoral vessels. The history of this case and these physical signs pointed very conclusively to the existence of an aneurism of the arch of the aorta.

"But let me point out to you before passing further that in cases of intra-thoracic tumor you may have a somewhat similar history, and you may have likewise most of these physical signs, and, therefore, mistakes are apt to be made. You may even have the physical signs of pulsation and of murmur; of pulsation, because the tumor may be lying on the aorta, or one of the large vessels from which it may be communicated; and of murmur, because it may be pressing on one of these vessels and obstructing the flow of blood through it. There were, however, two physical signs in this case which are not observed in cases of tumor. One of these is 'purring tremor,' and the other the feeling of expansion in addition to pulsation. Then there were other features in the case which confirmed our diagnosis, if such confirmation was needed. On examining the superficial vessels of the arm for example, we observed that they pulsated very visibly; that they were tortuous, and felt like firm, hard, almost tendinous cords. In fact, we had here signs indicating a degeneration of the coats of the superficial vessels; and we know that when the superficial vessels are degenerated, the coats of the aorta are generally degenerated, too, and that a degeneration of the coats of the aorta is the usual predisposing cause of aneurism. Then on examining the heart we found that the apex-beat was displaced. It was situated three and a half inches below, and an inch and a half to the left of a vertical line drawn through the nipple. The impulse of the heart was heaving; it was observed over a preternaturally extensive area, and there was increased dullness on percussion in a downward direction, and to the left. That is to say, there were the usual symptoms of dilated hypertrophy of the left ventricle of the heart—a condition which is very usually, though not invariably, met with in connection with aneurism of the aorta, owing to the obstruction which it offers to the onward passage of the blood. In cases of aneurism, too, and for a similar reason, we often find inequalities in the pulses on the two sides of the body. There was not much difference in the pulse at the wrists in this case, but in the right carotid the pulsation was very much stronger than in the left. Again, in non-aneurismal tumors, and particularly in cancerous tumors, which are those most frequently observed within the chest, there is very often a marked distention of the superficial veins. In aneurism this is not generally a marked feature, because the aneurismal tumor is soft and yielding, and does not compress the parts to the same extent as a solid, and therefore unyielding, tumor. In our patient there was no marked distention of the veins. And, lastly, the sex of the patient was just what we might expect in a case of aneurism, which is much more frequent in males than in females. There are, however, certain symptoms frequently observed in cases of aneurism of the aorta, which were conspicuous (sic) for their absence in this one. Let

me mention a few of these. Sometimes the thoracic duct is compressed, and then, owing to the system being deprived of its nutrient supplies, there is rapid emaciation. Our patient was not much emaciated. Again, in a case in Dr. Scott Orr's wards, in which I lately performed galvano-puncture, there was dilatation of the left pupil from pressure upon the sympathetic, which was absent in our patient. In a good many cases there is pressure upon the recurrent nerve; but in this one, although the patient was hoarse, there were none of the usual symptoms of pressure upon it; there was no paralysis of the vocal cords, and there were none of those attacks of suffocative dyspnœa which constitute such a distressing feature of many cases of aneurism of the aorta. And, finally, there was no evidence of distinct pressure upon the bronchi, because there was no marked shortness of breath, and the air entered apparently with equal freedom into both lungs.

This patient was admitted on the 11th of October, and we thought it right, for a short time at all events, to watch him without carrying out any very energetic treatment. We kept him in a state of perfect repose in bed; we regulated his bowels with castor oil in order to prevent any straining at stool, and, with the view of calming down the nervous and circulatory systems, we gave him five and twenty grains of chloral at bed time. It soon became evident, however, that the tumor was progressing rapidly towards the surface, and the only hope for him, therefore, in my opinion, lay in giving him the chance of the operation of galvano-puncture. This was performed seven times in all—namely, on October 22d and 26th, on November 2d, 7th and 23d, and on December 1st and 14th. In each operation a Stohrer's battery with large cells was used; and unless I state the contrary, you may take it for granted that only one needle was used, and connected with the positive pole. The first operation then was on the 22d October, on which occasion eight cells were used, and the operation lasted half an hour. On October 26th the tumor was not in the least diminished, but, on the contrary, was becoming more prominent towards the left side, and the patient complained of a feeling of soreness across the root of the neck. On this day, therefore, the second operation was performed. Six cells were used for ten minutes, and then eight for fifty minutes—one hour in all; and during the whole of this time the patient complained of burning heat in the aneurism. On October 28th the tumor was somewhat firmer, and a distinct hard line was observed along the track of the needle. The skin covering it was the seat of a slight inflammatory blush, and the patient complained of a feeling of stiffness across the root of the neck, and occasionally of "stounding" pains in the tumor itself; temperature 99.3°. On account of these symptoms of reaction we only allowed him light food—milk diet and soup. We gave him a draught of castor oil, and applied ice-cold cloths over the tumor for half an hour at a time. On October 30th the pain in the tumor had disappeared, and the temperature had fallen to 98.4°, but the feeling of stiffness and soreness was even more marked, and there was some complaint of pressure upon the windpipe, of shortness of breath, and of weakness. On November 2d the third operation was performed, the needle being introduced into upper part of the tumor. Eight cells were employed on this occasion, and the operation continued thirty minutes,

during the whole of which time the patient complained of intense burning pain. This, however, was soon relieved, as on the former occasion, by the application of iced cloths. On the 3d November, as he complained a good deal of palpitation and of pulsation in the swelling, the tincture of veratrum viride was prescribed in doses of three drops, gradually increased to ten, three times a day. On the 6th November the tumor felt firmer. There was no pain, and the patient felt comfortable. On the following day the fourth operation was performed. On this occasion two needles were made use of—one connected with the positive, and one with the negative pole. They were introduced parallel to one another, and an inch and a quarter apart. The operation was continued for thirty minutes, four cells being used for the first twenty, and six for the remaining ten minutes. During the whole time the patient complained of intense burning pain. Now mark what happened on withdrawing the needles. On withdrawing the needle connected with the positive pole, not a drop of blood escaped; on extracting the needle connected with the negative pole, however, a jet of blood followed, which at first was dark, but soon became florid and spouted in jerks as from an artery of moderate size. Nearly an ounce escaped in all, and the hæmorrhage was arrested by the pressure of a graduated compress of lint. I shall refer to this again. On the 23d November it was reported that the patient had had no pain since the last operation, and that the heart's action under the influence of the veratrum viride was calm. On examining the tumor on that day it was found to be less firm and more prominent, and in the center there was distinct pointing, and the skin in this situation had a deep brownish-red tint. The fifth operation was peformed on this day. One needle was used, which was introduced into the central part of the tumor, the point of the needle being immediately opposite the part which was pointing. Six cells were used, and the operation was continued thirty minutes. Burning heat was complained of, but this was relieved as before by the application of iced cloths. After the operation the pulse was 85, and the heart's action excited, but this was relieved by the administration of ten minutes of the tincture of veratrum viride. On the 1st of December the tumor was observed to be much more prominent and pointing most distinctly, and the discoloration of the skin had much extended. Galvano-puncture was performed for the sixth time; six cells being used for fifty minutes. On the 10th of December my assistant, Dr. Strother, being summoned to the patient, found that there was a slight oozing of bloody serum from the most prominent part of the tumor. It was arrested by the application of collodion. On the 14th of December the seventh and last operation was performed. Three needles, which were not insulated, were used on this occasion, all in connection with the positive pole, the needles being inserted so that the points were opposite the most prominent part of the swelling. Six cells were used, and the operation was continued for an hour. During the operation there was a slight oozing of blood, owing to the displacement of the collodion. On the 15th of December, at half-past four o'clock in the morning, a considerable stream of blood was observed to be flowing down the chest, having separated the collodion covering. The whole tumor was

enveloped in narrow strips of lint, soaked in collodion. Over these, strips of gutta-percha tissue were placed and sealed up with chloroform, which for the time arrested the bleeding. Next morning, at half-past seven, the patient became very weak and vomited. Dr. Strother placed his hand upon the tumor in order to give it support, and while the patient was retching something distinctly gave way, and he exclaimed, "There it is!" This was followed by a gush of blood on all sides, which quickly saturated the sheet and pillows, and for a time he was pulseless. The hæmorrhage was again arrested as before, and the vomiting ceased. After the administration of iced champagne the patient rallied a little, but from time to time the bleeding recurred, and he sank, exhausted and insensible, on the 18th of December, at 10:30 a. m.

On post mortem examination, the surface of the body presented nothing remarkable, with the exception of a dark prominent mass, which protruded from the skin immediately above the supra-sternal notch, and inclined a little to the left side. It had an oval shape, and measured about three inches from above downwards, and two inches across. Its surface was very irregular, and it was evidently composed of coagulated blood. It was found to communicate, by an aperture in the skin, measuring two inches from above downwards, and one inch across, and about the level of the thyroid gland, with an aneurism of the aorta. The heart was very much enlarged, the left ventricle in particular being hypertrophied and dilated. Owing to the way in which it was thought right to remove the parts, its exact weight could not be ascertained, but it probably weighed from twenty to twenty-two ounces. Numerous calcareous plates were found in the aortic arch, which was somewhat wider than natural. A very large, sacculated aneurism sprang from the upper surface of the transverse portion of the arch, with which it communicated by an apperture large enough to admit two fingers, and situated just before the giving off of the large vessels, none of which were directly involved in it. The aneurism was somewhat oval in shape, its long axis, directed from above downwards, measuring between five and six inches. It lay in front, and a little to the left of the larynx and trachea, which it forced slightly backwards and to the right, but it did not seem seriously to interfere with these parts. Although the large vessels were not at their origins involved in the aneurism, the left carotid and subclavian were found to be firmly adherent to, and in part imbedded in, the walls of the sac, while the innominate was only very slightly attached to it. The sac was almost completely filled with old and recent clots, and at one place, almost in the middle of the sac, and in a line with one of the needle punctures, there was a very distinct stratified coagulum which was much paler and firmer than the rest. The other organs of the body were healthy."

This lecture is of great interest, both in a scientific and practical point of view, and merits the attentive consideration of the profession. We cannot avoid, however, impugning what, in two instances, we believe to be inaccuracies. Dr. Anderson tells us that "in a case in Dr. Scott Orr's wards, in which I lately per-

formed galvano-puncture, there was *dilatation* of the pupil from pressure upon the sympathetic." Now, we can understand how dilatation of the pupil may arise from *irritation* of the sympathetic, owing to the proximity of an aneurismal tumor: but simple compression of the sympathetic would have quite the contrary effect. It would cause contraction of the pupil. As far back as the close of 1851, M. Claude Bernard made public the results of his experiments on the effects of section of the cervical sympathetic; one of the most marked of these being the permanent contraction of the pupil. Even as far back as 1727, Pourfour du Petit fully established the fact that the radiating fibers of the iris are under the influence of the sympathetic system, or, in other words, that the sympathetic acts as a simple conductor in transmitting an influence seated in that portion of the medulla spinalis, extending from the first to the sixth dorsal vertebra, which portion has been termed by Budge, the *cilio-spinal region.* But more recently Bernard determined accurately the region from which the sympathetic derives its influence upon the pupil, and is of opinion that it resides in the portion of the medulla included within the two first dorsal pairs; and that it is transmitted to the ganglionic system more especially by the anterior branch of the second pair. Banks (*Dublin Hospital Gazette*, 1856) relates a case of aneurism of the aorta, in which there was a permanent contraction of the left pupil from compression. Hane, in 1838, Gairdner, (*Monthly Journal of Medical Science*, Feb., 1853), and Williamson in 1857, all proved the same effect of compression of the sympathetic in aneurism of the aorta. Somewhat further our author observes, "In a good many cases there is pressure upon the recurrent nerve; but in this one, although the patient was hoarse, there were none of the usual symptoms of pressure upon it; there was no paralysis of the vocal cords." Here we are disposed to draw the very opposite inference from the circumstance of hoarseness as stated. We would consider it as an indication of partial pressure, or pressure limited to one or other recurrent. Where there is compression of both recurrents, we expect to find complete aphonia.

Traube (*Deutsche Klinik*, 1860, No. 41, and 1861 No. 27) has published two cases of this disease, in which the larynx was examined by means of the laryngoscope. In one the voice was

not entirely lost, and paralysis was limited to the left recurrent. When the patient would pronounce the letter e, the left vocal cord remained immovable. In the other case there was complete aphonia; the glottis was largely dilated; the left vocal cord was altogether immovable; the right slowly approached the median line. Mere feebleness of voice in aortic aneurism generally depends on pressure on the trachea; but where there is hoarseness, or complete aphonia, there is compression of one or other recurrent, or of both at the same time.

We may seem to be hypercritical in thus adverting upon what will seem as blemishes, trifling though they be, in comparison with what otherwise is, in a high degree, deserving of commendation, but we trust we are governed solely by a sense of what is due to just criticism—in demanding the pointing out of defects equally with the praise of excellence.

The remaining lectures are valuable, and will amply repay perusal. We regret that space compels us to draw our strictures to a close, and we take leave of the author on this occasion, in recommending his work as an excellent guide either for student or practitioner. W. G. D.

LESSONS IN LARYNGOSCOPY, INCLUDING RHINOSCOPY AND THE DIAGNOSIS AND TREATMENT OF DISEASES OF THE THROAT. By Prosser James, M. D., M. R. C. P., etc. Second edition, with colored plates. Baillière, Tindall and Cox, London, 1878.

This is a small book of 176 pages, the first edition of which was issued in 1873. The author has not thought it necessary to revise the text for the second edition, but has merely added several colored plates, which represent with considerable accuracy various conditions of the larynx, and will be of benefit to beginners. The work is freely illustrated with wood-cuts, which, owing to careful descriptions, answer their purpose well, and the author's style is so simple and lucid that his instructions may readily be understood by the student.

The author, after a brief history of laryngoscopy, describes the various instruments and apparatus required, and the proper methods of using them. He then describes the normal laryngeal image, and in the fourth chapter points out the difficulties which

the laryngoscopist has to encounter, and gives plain and simple directions for overcoming them.

Then follows a more minute description of the larynx and the various modes of demonstration, all of which is rendered intelligible even to the tyro. In the eighth chapter Rhinoscopy is considered, and in the tenth the Practical Use of Laryngoscopy in diagnosis and treatment of the various diseases of the vocal organ.

This little work is the most valuable guide we have seen for the student of laryngoscopy, and we can heartily recommend it. Its excellencies are many, and its defects unimportant, though we confess that the wood-cuts and press-work are the poorest we have ever seen in a medical work. It is very unfortunate that a work so well written should have appeared in such a shabby dress.

NINTH ANNUAL REPORT OF THE STATE ROARD OF HEALTH OF MASSACHUSETTS. January, 1878.

Besides a great many statistics and reports of local interest, this volume contains a few papers which it is a pity to bury in a book of such limited circulation.

Dr. J. F. A. Adams, of Pittsfield, gives the description and plans of "Cottage Hospitals," as they have been established in many country places in England ever since 1859.

Professor Wm. Ripley Nichols contributes a lengthy article on the "Filtration of Potable Water." In regard to artificial filtration on a large scale, the following conclusions are arrived at:

1. No other material has yet been brought into practical use for artificial filtration on a large scale, except sand.

2. With our present knowledge, we have no evidence that sand filtration can be regarded as an efficient means of purification of *polluted* water; although it may, if properly carried out, lessen the liability of ill effects.

3. All visible suspended particles, and an appreciable proportion of organic matter actually in solution, may be removed by properly conducted filtration through sand.

4. For the present, at any rate, it will be best to regard arti-

ficial filtration mainly as a means for the removal of *suspended* matter.

The so-called method of natural filtration consists in drawing the supply from what is known as the ground-water, and is practicable only in localities where the ground-water is of good quality, and free from possibility of pollution.

The most interesting paper in the volume is Dr. B. J. Jeffries' essay on the "Dangers arising from Color-blindness," with especial reference to railroad employés and sailors. Just about one hundred years ago the first cases of color-blindness were made public by Joseph Huddart. In 1794 the English chemist Dalton published an account of his own case, he being red-blind; and ever since red-blindness was called Daltonism. Dr. George Wilson, of Edinburgh, in 1855, in his book on color-blindness, has already referred to the dangers from this defect of vision. He says: "The professions for which color-blindness most seriously disqualifies, are those of the sailor and railroad servant who have daily to peril human life and property on the indication which a colored flag or lamp seems to give. * * * The appalling yearly list of lost vessels awakens the suspicion that more than one of these fatal disasters may have resulted from the mistaken color of a light-house, beacon, or harbor-lamp.

"On railways the danger attending mistakes of signals is much greater than at sea. The most marked peculiarities of the color-blind are shown in mistaking (1) bright red for green, (2) dark red for brown, (3) red for black, and (4) dark or light shades of all colors for each other. The caution signal *green* is thus liable to be mistaken for the danger-signal *red*, and the latter (when it appears black) not to be seen at all."

But Dr. Wilson's voice of warning was not heeded, and his efforts did not bear the fruit they deserved. Twenty-two years later, in 1875, a railroad accident occurred in Sweden, which greatly excited public attention and the evidence of which lead Prof. Holmgren to suppose that color-blindness was one of the principal causes of the disaster. He gave this matter his whole attention, and by untiring efforts succeeded at last, that in 1876 throughout Sweden it was ordered that all the railroad employes should be tested for color-blindness by Holmgren's method. This

method of examination combines simplicity and rapidity with absolute certainty; it consists in the use of worsteds of various colors whereby the person examined does not name the colors, but simply selects them by comparison with the test. By it, a number of eyes can be tested for color-blindness in a relatively short time (about one minute for one person) whilst it does not call for any special intelligence on the part of the person examined.

The magnitude of the danger from color-blindness depends, of course, on the frequency of the defect. In general it may be said that the more accurate examinations of recent date show it to be more frequent than one is generally inclined to think. Dr. Wilson tested altogether 1,154 persons, and found 65, or 5.6 per cent. color blind. Prof. Holmgren found 13 color-blind among 266 railroad employes, or 4.8 per cent. Prof. Dove, of Berlin, reports 40 color-blind men among 860, or 4.6 per cent. Dr. Favre, in France, up to 1855, examined 5,000 candidates for railroad work, and rejected more than 50 for being red blind, and among 224 conductors examined by him, 14 were found decidedly color-blind. Prof. Donders examined 2,300 employes on the Holland roads and found 152 of these color-blind. Dr. Jeffries has recently tested 611 instructors and students of Harvard University, and detected 30 color-blind.

The best proof of the recognition of the great danger from color-blindness is the fact that measures have been recently taken to test men for color-blindness on most of the railroads in Sweden, Denmark, England, France, Germany, Holland, Prussia and Italy. Nothing has yet been done in this country; this whole question was first publicly discussed in 1877, before the Boston Society of Natural History, through the efforts of Dr. Jeffries. Thanks to his persistent labors, we are informed, several railroad companies have already ordered an examination of all their employes for color-blindness. And let us hope that the time will not be far when every railroad company will be compelled by State laws to have every applicant for service examined for color-blindness by an expert and to refuse him if disqualified.

F. C. H.

PRESCRIPTION WRITING. Designed for the use of medical students who have never studied Latin. By Frederic Henry Gerrish, M. D., Professor of Materia Medica and Therapeutics in the Medical School of Maine, etc. Second edition. Portland Me.: Loring, Short & Harman. 1878; pp. 51.

The object of this little book is to give to those who have never studied Latin, what little knowledge of this language is essential to correct prescription writing. It contains such general rules for writing prescriptions, as should be observed, whatever the language may be in which the prescription is written; it shows the variation in Latin words in the different declensions necessary to indicate the possessive and accusative cases; and to illustrate the rules, a few examples are given of prescriptions written in English and translated into Latin, the translation being explained step by step in detail. In the second part of the book are collected all the Latin words used in the United States Pharmacopœia. The nouns and adjectives are classified in five lists according to their declensions; the sixth list contains the indeclinable nouns; list VII gives the numerals and ordinals; list VIII the verbs, and list IX the adverbs, conjunctions and prepositions.

The whole subject of writing prescriptions in Latin is reduced to its smallest possible compass. And as long as the fashion of Latin prescription writing is continued in text-books, journals and practice, so long will this little book prove useful (we dare say indispensable) to a great many American physicians who care to conceal their lack of classical education, and to spare the feelings of medical editors, so often offended by manuscripts bristling with imperfectly written formulæ. F. C. H.

A MANUAL OF NURSING. Prepared for the Training School for Nurses, attached to Bellevue Hospital. New York: Putnam's Sons. Chicago: Jansen, McClurg & Co. Pp. 143; price $1.00.

This little work has been prepared in the hope that it will be useful to those who are earnestly studying to become good and efficient nurses. It contains terse and clear instructions on hospital management, observation of the sick, administration of med-

icine, applications, dressing of wounds, operations, special medical cases, emergencies, monthly nursing, nursing of sick children, hygiene of children, with rules for cooking for the sick, and table of weights and measures.

Many ideas are borrowed from Miss Nightingale's "Notes on Nursing;" also from Miss Lee's "Hospital Sisters," proper credit being given to both of these authors.

The work cannot fail not only to meet the object intended for the class specified, but has in it much to recommend it to the perusal of a still larger class—to the mothers and attendants in homes where poverty denies the admittance of the professional nurse. S. F. B.

VISIONS; A STUDY OF FALSE SIGHT (Pseudopia.) By Edward H. Clarke, M. D. With an introduction and memorial sketch by Oliver Wendell Holmes, M. D. Boston: Houghton, Osgood & Co., 1878; 12 mo. pp. 315.

This is a remarkable book. It is said to be an unfinished essay but most readers would fail to discover the fact in reading the work.

Written while the author was waiting to die of cancer and for occupation during this weary time, notwithstanding the perturbations of mind that must have attended the labor, it appears in the author's most fascinating style and to the end of the book it contains no internal evidence of failing faculties. What a man — what a mind, to have wrought such a work under such circumstances!

The essay is an attempt to find a physiological explanation of pseudopia—false sight—of visions.

Seven instances of the seeing of visions are detailed. In each case the subject was a cultivated and trustworthy person and one also who, while he beheld the unreal object, knew the sight was false, knew it must be only an appearance; in some cases knew or believed the cause to be in his own disturbed brain or body. Having related these examples, the author proceeds to discuss the physiology of sight and dwells at length on the rôle played in this function by the different parts of the cerebral machinery.

The discussion is carried into the field of pathology of this

function and the conclusions arrived at—or some of them—may be fairly represented by a few quotations from the writer's own words:

"Seeing is a matter of the brain and not of the eye; the eye only transmits impressions."

"Human sight is not accomplished till sensory impressions are transformed into ideas and this is done in the hemispheres."

"When this is done—when the organic basis of visual ideas is formed there, seeing takes place, whether there is any corresponding external object or not."

"The brain cells, acting under subjective stimuli, may arrange themselves in such a way as to represent a vision, that is sight, when no external object, corresponding to it, exists."

"A vision is produced whenever the cell-groups, indicating that vision—its hieroglyphic or cypher—are formed in the brain, whether they are formed normally, by the stimulus of light waves from an external object, or abnormally, by a stimulus initiated intra-cranially."

Whether all of the ideas of Dr. Clarke about the details of cerebral physiology are correct we do not need to examine. His notions of the function of the tubercula quadrigemina, of the angular gyri, of the hemispheres, in the physiology of sight, may in the future find themselves far from the accepted doctrines—to-day they would doubtless be questioned by some. But it must be true that normal sight is attended with some change of a peculiar and characteristic kind in the brain. Whether this be called by the name of cell-grouping or by some other, matters little. This admitted, the conclusions of Dr. C., in explanation of visions seem beyond controversy. They are not only correct to-day, but they are of that character that compels the belief that they will be true in the light of the knowledge of the future.

In thus explaining, in a philosophical manner, the appearance of visions, in an essay almost as acceptable and readable to those outside as in the medical profession, our author has done a substantial service to mankind.

The measure of this service is fully understood only when we consider that the explanation of visions is directly or indirectly the explanation of much of the manifestations of modern spiritu-

alism, of trance, somnambulism, and the like. The conclusions of the author prick many of the bubbles of this kind, blown so industriously, and for so long, by a great multitude of very well-meaning spiritualists and believers in modern wonders and miracles, some of whom have gone crazy, or worried their lives away on account of the sights they have supposed they or others have seen. N. B.

ST. BARTHOLOMEW'S HOSPITAL REPORTS, Vol. XIII, 1877, Edited by W. S. Church, M. D., and Alfred Willett, F. R. C. S.

This valuable work presents, as usual, an admirable collection of papers by members of the hospital staff. The volume opens with a paper by Dr. Andrews, "On Presystolic Murmurs at the Heart's Apex," giving at some length the characters of the sound and nature of the lesions which accompany it; subjects upon which the author has some views of his own. The second paper is by Dr. Legg, upon "The Essential Features of Jaundice," in which he describes quite fully the invariable appearances accompanying the disease, the color, the condition of the various secretions, changes in the blood, the fæces, and the urine with its various and varying constituents and tests for the same; the pathology of the disease is hardly touched upon, still less its ætiology. References to its literature are copious, and some rare cases are mentioned. The paper is a valuable one.

Mr. Leach gives some "Brief Notes on the Outbreak of Scurvy in the late Arctic Expedition," being a summary for the Blue Book containing the testimony elicited during the admiralty examination, into the causes thereof and circumstances attending it. The crews of the "Alert" and the "Discovery" started on their long expedition exceptionally well prepared; yet sixty of them were seized with scurvy and four died. Most of those attacked were addicted to intemperance, while at the same time insufficient supply of lime-juice and living in close quarters below deck had much to do with the spread of the disease.

Mr. Kesteven contributes two papers; one (illustrated) entitled "Further Histological Researches on the Pathology of the Nervous System," the other on the "Structure and Functions of the

Olivary Bodies." The first is for the most part a lucid description of certain changes—atrophic and degenerative—in the nervous elements and blood vessels of the nervous system. He holds, with Key and Retzius, that the peri-vascular spaces are not normal; that dilatation of a vessel will induce absorption or sclerosis of its surrounding nervous substance, and that after death the vessels, being no longer distended, contract and thus seem to be lying in these spaces. He also doubts whether the vascular endothelial proliferation described by Heubner as well as the 'miliary degeneration,' can be regarded as pathognomonic of syphilis. His description of the olivary bodies is clear and concise; he regards them as associating the functions of the fifth, eighth and ninth nerves, with whose nuclear origins they are so closely connected.

Dr. Gee furnishes three papers. One "On Chronic Pneumonia Attending Disease of the Tracheal and Bronchial Glands," with four cases; one on "Spastic Paraplegia," with four cases; and "A Contribution to the History of Polydipsia," giving a brief but interesting account of two cases of congenital and and inherited diabetes insipidus, the disease having run through four generations.

Mr. Champneys describes a case of "Extroversion of the Bladder, in a Female Child," which he makes a text for an extended account of the malady, its anatomy and ætiology, with a bibliography of the subject. The same author gives also a "Case of interstitial Fibromyoma of the Uterus," which complicated pregnancy and labor. This paper is rendered more interesting by the same resort to the literature of the subject that characterized his first.

Dr. De Havilland Hall contributes an important paper "On Fribinous Exudation in the Bronchial Tubes." He reports a case of plastic or fibrinous bronchitis, and writes at some length summarizing our knowledge, or rather ignorance concerning its pathology and treatment.

Dr. Legg reports some "Cases Bearing on Diseases of the Liver," including a case of supposed "movable liver," two cases of cirrhosis in children, and one case of primary, melanotic

cancer. He appends a bibliography of his subjects, which adds largely to the value of the report.

Papers are contributed by Dr. Godson "In a Case of Paroxysmal Hæmaturia;" by Mr. Vernon on "Intolerance of Light;" by Mr. Butlin on "Fatty Tumors in Infancy and Childhood." Mr. Hussey reports a case of "Aneurism in the Gluteal Region," which was operated upon and which finally died of exhaustion and complications.

Mr. Albert Doran has an illustrated article on "Complete Intra-peritoneal Ligature of the Pedicle in Ovariotomy." He favors cutting off such ligatures close to the knot, and proves from pathological specimens that such practice is unattended with danger.

Mr. West furnishes a report of a number of medical cases, including one on "Hypertrophic Cirrhosis," which is accompanied by a lithograph of the microscopic appearances. Surgical reports are furnished by Mr. Holden on a case of "Aneurism of the Right Subclavian," for which amputation at the shoulder was performed without avail; by Mr. Eve, of a case of "Fracture through the Odontoid Process," with a collection of similar cases (eleven) gleaned from the literature of the subject; and by Mr. Baker, on "The Formation of Synovial Cysts in the Leg in Connection with Disease in the Knee-joint," which title explains itself. Dr. Duckworth in a paper on "The Ætiology of Mitral Stenosis," combats the idea that rheumatism is necessarily an essential factor, not more than 60 per cent. of his cases having such an origin. Cases are reported by Mr. Kidd, Mr. Abercrombie and Mr. Darbishire, which we have not space to notice. One of the most valuable of all the papers is "On the Albuminous Substances which occur in the Urine in Albuminuria," by Dr. Brunton and Mr. Power, which is a positive contribution to our knowledge of this subject. We regret that we cannot even sum up the authors' general results.

To the above are appended the proceedings of the Abernethian Society, including a learned address by Dr. Gee, and an interesting paper on "Delirium" by Dr. Verco.

The volume closes with elaborate statistical tables of patients

under treatment, which are models in their way. The illustrations are all good, and the work fully up to the standard.

R. P.

THE IDENTIFICATION OF THE HUMAN SKELETON; A Medico-legal Study. To which was awarded the prize of the Massachusetts Medical Society for 1878. By Thomas Dwight, M. D., of Boston, late professor of anatomy at the medical school of Maine. Boston: David Clapp & Son, printers, 1878. Octavo, pp. 54.

This is an ably written essay. The subject of which it treats is presented in a clear, concise way and with a judicial fairness and care that must give to it an important place as a guide in any legal investigation wherein the identification of the human skeleton is an important question. The work embodies a fair compilation from authors on the subject—whose conclusions are discussed, but it acquires its chief value from the records of the numerous careful measurements of skeletons which the author has himself made. It is illustrated by a number of graphic drawings, some of which represent an actual scale in centimeters. We are glad to see this, for if we are to be compelled to learn the metric system, as now seems to be the case, the more we are familiarized with the new measures the better.

N. B.

LANDMARKS, MEDICAL AND SURGICAL. By Luther Holden, F. R. C. S., etc. From the second English edition. Philadelphia: Henry C. Lea. 1878; pp. 128.

This little book, originally dedicated to the students of Saint Bartholomew's Hospital, will prove to be a very useful anatomical guide-book to every student and practitioner inasmuch as a thorough knowledge of the anatomical relation of the surface-marks on the human body to deeper-seated structures, is of the greatest practical importance.

F. C. H.

Summary.

Collaborators:
DR. H. GRADLE, DR. L. W. CASE, DR. R. PARK,
DR. R. TILLEY, DR. D. R. BROWER.

PHYSIOLOGY.

CONCERNING WHITE CORPUSCLES.—Burdon-Sanderson.—(*Br. Med. Jour.*, Jan. 12, 1878.)

It is now known that fibrin does not exist *as such* in the blood; but is formed by two elements—fibrino-plastic and fibrinogen. The cause of their union has hitherto been obscure, but Burdon-Sanderson has shown that the disintegration of the white corpuscles furnishes a sufficient cause, and that such disintegration takes place as soon as they leave the blood stream. The experimental proof is this: blood is caught in a tall jar which is surrounded by ice; it remains incoagulated, the red corpuscules sink, the white rise and float on the serum. Examination of the upper layer shows the white corpuscles rapidly undergoing disintegration, breaking up into granules which cohere for a time, but eventually disappear. Further, if these leucocytes be withdrawn coagulation is arrested. At a freezing temperature they may be separated by filtration. The filtrate is then absolutely deprived of power of coagulation until the corpuscles be restored to it.

Prof. Schmidt has seen the first formed filaments of fibrin originate from the granular débris left behind by the migrated corpuscules.

Collin (*Le Progrés Médical*), has studied the rationale of the melanæmia and pigmentation of malarial fever. Parts most in contact with the blood (*e. g.* the vascular walls), enjoy the least

immunity. These deposits are derived indirectly from the red corpuscles which are destroyed in the spleen. The white corpuscles take up the débris of the red ones and with this form the pigmentation. The immigration in such cases is very active. The process is analagous to transportation of coloring matter by the leucocytes when inflammation is studied by the aid of injection of carmine or similar coloring matter.

INFLUENCE OF POSITION ON CIRCULATION. — At a June meeting of the Academy of Medicine (*Br. Med. Jour.*, July 13, 1878), Mr. Lister, at the time a visitor in Paris, gave a demonstration of his views on this subject. He held that in the elevated position of a limb, its anæmia was due neither to gravitation of blood nor to paralysis of the vaso-motors, but to reflex action, caused by depletion of the veins and contraction of the arteries. His demonstration consisted of the application of an elastic bandage to the root of the limb, which was kept in an elevated position for a few moments; the arm was then lowered, and although the bandage was retained in place, the arm continued to present a bloodless appearance; finally, the arm was raised again, the bandage removed, while the member was kept for a time in the same position. The redness was seen to rapidly return, and then the limb to get pale again before the application of the tourniquet. Mr. Lister concluded by showing the practical application of the theory, and the good results that may be obtained by the elevation of parts that are the seat of inflammation; he instanced also the good effect of raising the arms above the head in cases of epistaxis, which produces reflex contraction of the vessels of the arms, and sympathetic contraction of those of the head and face.

PRACTICAL MEDICINE.

FATAL PURPURA FOLLOWING THE USE OF IODIDE OF POTASSIUM.—Mackenzie.—(*Br. Med. Jour.*, June 8, 1878.)

An infant, aged five months, had prescribed for it a mixture containing 0.15 of potassic iodide at a dose, for congenital syphilis. Three quarters of an hour after taking the first dose the

child's face was noticed to "turn black." The extravasations rapidly and visibly increased in size, the eyelids closed, the face and chin were tensely swollen, a few spots appeared on the arms and legs, and after sixty-eight hours the babe was dead.

The autopsy showed necrosis of the purpuric spots on the face, and syphilis and ulceration of the intestines. But a single dose had been taken.

The author thought it would be necessary to review what was known of syphilitic and iodic purpura. His opinion of this case was that while there was undoubted syphilitic dyscrasia; the fatal purpura was due to the iodide.

SURGERY.

SURGICAL CASES FROM A PHONOGRAPHIC REPORT OF A CLINICAL LECTURE. Lewis A. Sayre. (*Virgin. Med. Monthly.* May, 1878.)

CASE I.—*Spondylitis of Cervical Vertabræ.*—This is the little girl whom you saw last Wednesday. She had been sick for two years, and had not walked for two months and a half. It is a case of spondylitis, or Pott's disease, effecting the cervical vertebræ. You remember we placed a plaster-jacket and jury-mast upon her last Wednesday; but after the lecture she complained of its uncomfortableness, which was sufficient proof that we did not do our work well. The jury-mast was placed a little too low down, so that its arch pressed upon the projecting portion of the spine. Dr. Vanderpool, the house surgeon, at once re-applied the jacket, raising the jury-mast a little, and now, as you see, she is able to walk without pain, though she is yet very weak.

This patient was brought in to illustrate the fact that mistakes in treatment are liable to be made even by those who have had considerable experience with similar cases, a fact which should serve as a warning to us when we are tempted for want of time, or other reasons, to dispatch patients too hastily. Whenever I make a mistake of this kind I learn something by it, and when-

ever it occurs in the treatment of my clinical patients, I bring them before you again, that we may learn a lesson together.

CASE II.—*Chronic Inflammation of the Knee Joint—Amputation at the Joint—Mark's Artificial Leg—Hudson's Extensor.*—The patient who is now presented was first brought to this clinic a year ago. She has suffered since childhood from a chronic inflammation of the knee-joint. When only a few months of age she received an injury to the knee which gave rise to an inflammation that continued up to one year ago, at which time she was eleven years old. At that time her leg was luxated backwards behind the condiles of the femur and partially rotated outward. The deformity was due to reflex muscular contraction excited by the inflammation in the knee-joint. Numerous sinuses lead to dead bone, and from the exhausted condition of the patient, due to excessive discharges, no relief could be given except by exsection of the knee-joint or amputation. Exsection was out of the question, from the fact that the leg and foot had not been sufficiently developed to give the limb length enough to be of use, and therefore amputation was the only thing to be done. The question then came up, whether the amputation should be at the joint or in the shaft of the femur? Although several sinuses lead to necrosed bone in different portions of the femur, and one to the superficial portion of the patella, yet I decided to amputate at the knee-joint in preference to going through the shaft of the femur. From the exhausted condition of the child, I feared that section through the shaft would result in osteo-myelitis. The superficial necrosis of the femur, it was thought, could be successfully treated by the use of drainage tubes. I decided to perform Dr. Stephen Smith's operation, which, for the knee-joint, is preferable to all other operations. It leaves the cicatrix entirely behind, while the patella, *in situ*, acts as a firm basis of support for walking. The result in this case, as you see, justifies my decision.

Mr. Marks has been so kind as to present this little girl with one of his artificial legs, so that she is now able to walk about with freedom and comfort. There is one deficiency with the leg which she wears—she cannot extend it; there is nothing to take the place of the quadriceps extensor muscle. To obviate this defect we will have one of Dr. Hudson's extensors applied to the

leg, which consists of an elastic band on either side of the leg plying over a portion of a wheel representing the quarter of a circle.

CASE III.—*Chronic Inflammation of the Knee-Joint, Complicated by Fracture of the Femur.*—This is a case which has been previously presented to you, of inflammation of the knee-joint, complicated by a fracture of the femur. There was deformity with fibrous anchylosis, the deformity being partially due to the fracture of the femur at the epiphysis. The fracture occurred when the patient was four years of age, but it was not recognized, owing to the fact that the inflammation which immediately followed, involved the knee-joint to such an extent as to direct all attention to the joint. She was treated constitutionally for white swelling of the knee-joint for several years, and finally recovered with her leg flexed at an acute angle and rotated outward, which was her condition, if you remember, at the time of the operation nine weeks ago. At that time, after breaking up the fibrous anchylosis at the knee, we experienced some difficulty in re-fracturing the femur, but fortunately succeeded in breaking it at exactly the point of original fracture, and placing the limb in perfect position. Extention was *immediately* applied, and Dr. Cuddeback, my assistant, dressed the limb with a plaster-of-Paris bandage. Sufficient compression was made with a wet sponge over the lower third of the femoral artery to cut off a portion of the supply of blood to the part, as is my usual custom after *brisement forcé* of the knee-joint, thus materially lessening the chances of inflammation. At that time, I told you we would be satisfied if, with the limb in position, we succeeded in getting anchylosis both at the point of fracture and at the joint. No constitutional or irritative fever followed the great violence which we did to the joint, and this I attribute largely to the immobile dressing which was used, and to the partial occlusion of the artery. We removed the dressing three days ago, and found that perfect consolidation had taken place at the point of fracture; fortunately, however, things had not proceeded so far at the joint. We therefore gave it slight passive motion, which has been repeated every day since that time, and now, as you observe, she is capable of walking without support, and has considerable

motion at the knee-joint, which can be materially increased by the faithful administration of the tincture of time and essence of patience, together with elbow grease and palm oil, technically called *massage*. If the pain produced by manipulation in such cases as this, lasts more than twenty-four hours, the manipulation has been too severe or too protracted.

On account of the atrophy which exists in the affected limb, making it a little shorter than the other, it will be requisite to place about two thicknesses of sole-leather upon the bottom of the shoe worn on this foot in order to equalize the length of the two extremities. By so doing she will be able to walk without limping.

CASE IV.—*Double Talipes Equino-Varus with Luxation of Knee.*—Dr. Forest, of this city, has kindly brought a very interesting case of double talipes equino-varus with luxation of the knee. There is paralysis of the posterior muscles; and the quadriceps extensor contracting, bends the knee-joint exactly opposite to the normal direction. The deformity thus resulting resembles in fact, what it was first thought to be, a fracture of the epiphysis of the lower extremity of the femur.

We will seize the limb and bend the knee out in the proper direction. When we attempt to bring the *foot* into its normal position, before the deformity has been completely reduced, the foot becomes white, due to the obstruction to the circulation. If the foot were retained in this position, it would slough; if left alone, it would return to its abnormal position and become more and more crooked. The rule is, after manipulation of the foot, to retain it in a position as nearly normal as possible without interfering with free circulation. For the fixation of the foot, adhesive plaster or sole-leather dipped in cold water may be used. Great stress should be placed upon the thorough and careful manipulation of the deformed foot, to be repeated as often as possible by the attendants, for there is no mechanical appliance which can be substituted that has the adaptability of the human hand. I have now, during the short space of time which the patient has been before you, manipulated both feet to such an extent that I can place them in very nearly their normal position, where they will be retained to await further manipulation.

CASE V.—*Result of a Case of Exsection of the Hip-Joint.*—George Brown, the young man now presented to you, is twenty-four years of age. When six years old, he received an injury to his hip from a fall. This gave rise to an inflammation in the hip-joint of a chronic character. Sinuses were formed on the outer and upper portion of the thigh, which discharged freely, and the patient became reduced to a skeleton. I removed the head, neck and trochanter major, and gouged the acetabulum on January 28, 1865, in this room. He was placed in the wire breeches, and removed to his home on the same day of the operation. He has recovered, as you see by his running up and down the steps and walking about the amphitheatre, with almost perfect motion. There is about one-half inch shortening. He is a large, strong and vigorous man, capable of doing a full day's work upon the farm, and has no inconvenience whatever from the limb.

CASE VI.—*Necrosis and Abscess of the Tibia.*—This man had the lower end of his right tibia removed seven years ago. He has been walking about since that time, but has never completely recovered. In all probability, there is dead bone within. This is one of those cases which Dr. Markoe describes as *progressive sinuous abscess of the bone.* That the pus burrows its way along, is simply due to the fact that the abscess has not been opened at the most dependent point. If the opening be made at the lowest point at first, no further burrowing will take place.

In this case we have a pocket which retains the pus, the pus burrowing its way through the tissues. We will now proceed to drill through the bottom of this sac, and place therein a drainage tube, which will prevent the possibility of the retention of the products of inflammation, until nature has had time to exfoliate the dead bone; in the meantime, the patient can attend to his business without any difficulty whatever. The process of exfoliation may sometimes be hastened materially by the prompt removal of the greater portion of the dead bone, where the necrosis is extensive.

CASE VII.—*Necrosis and Chronic Inflammation of the Tibia.*—This man had a portion of his tibia removed twenty-two years ago, but there was a little dead bone left which had given rise to

an inflammation of a chronic character. One month ago, his leg measured fifteen inches in circumference; it now measures twelve and a half inches in circumference. I drilled holes through the leg and put in tubing, which was followed by a pretty sharp hæmorrhage. There is now some motion. The great point in the treatment of these cases is to establish free drainage in a downward direction, and thus prevent the retention and absorption of pus. If you have a free external outlet for the pus which is formed within, there is no trouble. Get rid of all the dead bone if you can by mechanically removing it; if not, get rid of a portion of it, and see that there is free drainage. By probing, I find that there is a good-sized piece of dead bone which could be removed with advantage to the patient, and thus save time and materially hasten the process of exfoliation. The external opening which leads to this dead bone should be dilated with a sponge-tent, after which, with the forceps, this large, necrosed portion may be quickly removed. The other portions of dead bone may be easily removed by picking them to pieces with a silver probe. We have now succeeded in drilling a hole through the bone, and after passing this large probe, will draw a drainage tube through the opening thus made, which will afford a free outlet to the pus.

CASE VIII.—*Sacro-Iliac Disease—Differential Diagnosis from Hip-Joint Disease.*—I now present you with a case which was sent to me through the kindness of Dr. Hunt, of New Jersey, and which was supposed to be a case for exsection of the hip-joint. Dr. Hunt first saw the patient (colored) two weeks ago, but no satisfactory history of the case has been obtained. All the information which I have been able to obtain has been from the patient himself since his arrival at the hospital. He states that he is eighteen years of age; that two years ago he suffered from what might be called a general rheumatic fever. He has been exposed to wet, but under what conditions and to what extent was not ascertained.

As yet no satisfactory diagnosis has been made, and it is for the purpose of arriving at some definite conclusion in reference to this interesting and obscure case, that I have brought it before you.

When I first saw him three days ago, he was sitting up in bed, and occupied the exact position which a patient in the second stage of hip-joint disease usually occupies; that is, with the leg flexed upon the thigh, the thigh upon the trunk, the foot everted, and the limb *abducted.*

We will now apply Nélaton's test for displacement of the head of the femur, which consists in passing a line from the anterior-superior spinous process of the ilium to the tuberosity of the ischium. A line thus drawn will pass, when there is no displacement, exactly over the apex of the trochanter major, which we find to be the course of the line in this case. Now, if we had a fracture of the neck of the femur, the trochanter would be above this line; if absorption of the neck, head or acetabulum, the trochanter would also be above this line; the leg would be *adducted*, inverted and shortened. The position which the patient occupied when I first saw him, was sitting with his left leg flexed, abducted and rotated outward, which is the position of a limb when the hip-joint is over-distended, as with pus or serum. Further, in hip-joint disease, if the capsule of the joint be not ruptured, you cannot invert the toe, adduct the limb, or extend the thigh, without producing a great deal of pain. But in this case, taking care not to affect parts external to the joint by the motion of the limb, and to hold the pelvis absolutely still, we can invert the toe, and slowly adduct and extend the limb without causing pain. This would go to show that it was not the hip-joint which was involved, or else that the capsule of the joint has been ruptured, and the effusion into the joint squeezed out. Yet this can hardly be the case, for as we look at the limb, we see that it occupies the position common to the *second* stage of hip-joint disease. If the capsule of the joint had been ruptured or perforated so as to liberate the pus, the limb would no longer retain its present position, but would assume the position common to the *third* stage of hip-joint disease. Now, the limb can get in this position from muscular contraction, but if the deformity be due to muscular contraction, we can invert the leg and rotate it in, which movements we find can be effected in this case. This fact alone has satisfied me that there is no distention of the joint.

You probably will have observed that in making our examination we have avoided, ar far as possible, all sources of irritation and excitement to the patient, for when these patients become irritated, it is almost impossible to do anything with them. As he lies quietly on his couch, we may make some further observations. Our object is to elicit the exact location of the disease. By the application of Nelaton's test line, we have found that the trochanter major is in its normal position. I can crowd the head of the femur firmly into the acetabulum without causing pain. And, again, the leg is too long, and its position too good for a carious head of the femur, or carious acetabulum. You will observe that so long as we confine our examination to the hip-joint proper, our manipulations give rise to no pain; but when we crowd the ilii together with only a slight force, great pain is produced. By passing my thumb around the sacro-iliac junction, I elicit severe pain, and upon the inside I find a fullness which is indicative of a sacro-iliac abscess which has burrowed its way along down the thigh. In my examination of the patient three days ago, the pus broke out on the left side at the upper portion of the thigh. Nearly a half pint escaped, and so strongly was it impregnated with the odor of fæcal matter, that at first I took it to be a portion of the contents of the large intestine, but further examination proved this not to be the case. The matter discharged must have lain for a long time in contact with the rectum, and have derived its odor from the fæces through the principle of osmosis. I am happy to state that Dr. Stephen Smith agrees with me as to the probability of this cxplanatory conjecture.

It is painful to witness the extreme suffering of this man; but to-day he is far more comfortable than when I first examined him.

Many of the symptoms which we have elicited from this patient this afternoon are present in cases of hip-joint disease, but it has been our aim to show you how they are to be differentiated from those of true hip-joint disease. If I make firm pressure over the iliac fossa on the right side I get no pain, but pressure in the same situation on the left side gives rise to extreme pain. Now observe what I am doing. Extension of the femur gives the

patient ease; so it does in hip disease, but you will observe that I am extending the ilium through its attachments to the femur. I am making extension upon the sacro-iliac junction, and that is where the disease exists. As soon as I cease to make extension the patient is in agony, but so long as the extension is applied he is at ease. By placing my left hand over the superior crest of the ilium and pulling with great force, thus drawing the ilium from the sacrum, great relief is afforded the patient. While holding the ilium away from the sacrum, I am crowding the head of the femur firmly into the acetabulum, which gives rise to no pain, and settles the question that there is no disease of the hip-joint.

We have spelt out this case, as it were, and can now easily arrive at a correct diagnosis. We have found in our examination that so long as we do not affect parts external to the hip-joint, our manipulations give rise to no pain. With the sacro-iliac articulation extended, we can make firm compression over the trochanter major without producing pain. When the ilia are crowded together, intense pain is produced. Here, then, we have a clear case of *sacro-iliac disease*, which has gone on to suppuration, and the pus has found its way along down under Poupart's ligament, and come out upon the anterior portion of the thigh.

With reference to the treatment of this case, the first step of essential importance is that a free outlet for the imprisoned pus should be made, and the parts cleansed thoroughly. For this purpose, we will make a free incision along the anterior portion of the thigh were the pus has accumulated, rinse the cavity out with carbolic wash, fill it with Peruvian balsam, and stuff in some oakum. Had the abscess opened posteriorly over the sacro-iliac articulation, I would have made a free incision down to the joint, and laid open fully any sinuses leading to dead bone, removing at the same time any accessible portions of necrosed bony tissue. By placing this patient in the upright posture, the chances for drainage will be greatly improved, and the antiseptic applications which we have made will tend to bring about a more healthy state of affairs.

In the treatment of these cases of sacro-iliac disease, I have recommended extension. During the time when the patient is in

the erect posture, extension is to be made by increasing the thickness of the sole of the shoe which is worn on the foot of the unaffected side to such an extent as will permit the foot of the affected side to swing clear of the ground, and thus extension upon the sacro-iliac articulation will be made by the weight of the limb on the affected side. The extending force may be further increased by running lead into the sole of the shoe on the affected side. This method of extension is intended only to be used while the patient is exercising on his crutches. At night, and whenever resting in the horizontal posture, extension is to be kept up by a weight and pulley over the foot of the bed. The foot of the bed is to be raised a few inches higher than the head of the bed, by means of which the body acts as a counter-extending force. In my work on *Orthopœdic Surgery*, I have probably not been as explicit with reference to this part of the treatment as I should have been, and therefore some persons have imagined that I intended to keep the patient in the erect posture day and night until recovery took place. But I there stated that the same principle of treatment has to be carried out in dealing with sacro-iliac disease as was used in the treatment of hip-joint disease, which implied extension and counter-extension by means of a weight and pulley over the foot of the bed whenever the patient was lying down. However, I have not been understood, for Dr. McGuire, in the *Virginia Medical Monthly* for January, 1878, has thus misunderstood me. The abscess of the anterior portion of the thigh is now opened freely, and a large amount of very offensive pus with a distinct fæcal odor is escaping.

I have just made out another important point in this case. By introducing my finger through the incision which has been made to liberate the pus, I can pass it up and about the capsule of the joint which I find to be unruptured. This confirms our exclusion of the hip joint from disease.

We now inject the cavity with carbolized water, and having thoroughly washed it out, fill it with Peruvian balsam. We elevate the limb, so that the disinfecting balsam may come freely in contact with all parts internally. We will stuff in some oakum, cover the part with oil silk, and over this apply a roller bandage. Extension must be made as we have already sug-

gested. The patient should have a pair of crutches, so that he can get out into the open air and sun-light. He should have a sustaining diet.

REMOVAL OF GRAVEL FROM THE BLADDER.—By M. Dubuc. (*L'Union Médicale*, July 23, 1878.) M. D. presented to the Société de Médecine de Paris specimens of gravel—uric acid crystals—which the patient had been able to extract himself. He was a man 80 years of age, who had been operated upon—lithotrity—in 1867 and again in 1876. Convinced that he had to expect a renewal of the difficulty unless some means were adopted to prevent the accumulation, he, the patient, resolved to use aspiration in thoroughly emptying the bladder.

In 1877, M. D. exhibited to the society some uric acid crystals thus removed that were four millimeters in diameter. He exhibited, on the occasion in question, about fifty in number, and some of them six millimeters in diameter. The patient had not suffered from an attack of renal colic for more than twenty-five years, although he was constantly passing these uric acid crystals. He was in the enjoyment of excellent health.

The aspiration was at first practiced once a day, and then gradually reduced to once in six days. The instrument used was simply a glass syringe.

In the course of discussion on this subject, M. Mercier described the following method of accomplishing the same work. Previous to micturition the patient is requested to lie flat on his belly. After a few minutes of repose in this position, he rises slowly on all fours, and whilst in this position, is requested to pass his water. The object is to remove by their specific gravity the gravel from the cul-de-sac and force them along with the current.

PLASTER OF PARIS DRESSING FOR TRANSVERSE FRACTURE OF PATELLA.—Reported by M. Droullon, service of Dr. Denis-Dumont. (*L'Année Médicale, July*, 1878.)

The history of the case which gave use to the following plaster of Paris dressing runs thus:

Mr. V., a railroad worker, received a kick on the 28th of May,

1876, in the front part of right knee; began to run to avenge himself but found that he was helpless, not being able to extend his right leg. He went to the Hospital Lisieux; a dressing of dextrine was applied and on the 4th of September, 1876, he left the hospital cured.

He then walked, in order to get home, twenty-eight kilometers. In the evening, without any perceptible sudden pain, he perceived that the formerly united fragments were again separated, and he was utterly unable to carry the leg forward.

A fortnight later, 20th of September, he entered the Hôtel-Dieu de Caen. In consideration of the history it was thought the union would be accomplished with difficulty, and the following plaster of Paris dressing was devised.

Materials used: Two bands of tarlatan—twenty-four thicknesses—six centimeters wide—eighty long. Two pieces of strong tape two centimeters wide and fifty long. A steel buckle attached to a rubber strap from fifteen to twenty centimeters long. Half a litre of plaster of Paris.

Mode of application: The plaster being properly mixed, one of the bands of tarlatan is well saturated with it and placed round the lower part of the thigh—the leg being slightly flexed —so as to form a ring, placed obliquely from before backwards, and from above downwards; the lower border of the ring must adapt itself well to the upper border of the upper half of the patella, whilst behind, it passes down obliquely into the popliteal space. Whilst adapting this band the two pieces of strong tape must be well inserted between the folds of the tarlatan one in the middle behind, so that the free end may hang down towards the leg; the other similarly situated in front.

The second band is prepared in much the same way. The direction, however, must be different, namely the obliquity will be from below upwards and from before backwards. The upper part of the band must be snugly adapted to the lower border of the lower half of the patella. During its application the loose piece of tape, in the upper ring behind, must be incorporated in the band, and the buckles attached to the rubber bands must be inserted in front just opposite the center of the lower border of the patella and opposite the tape inserted in the upper ring.

The plaster being dry, the leg is extended and the two fragments are brought slowly together, the distances being slowly decreased according to the judgment of the surgeon.

In the case in question, the parts were not brought together until the fourth day. On the 15th of October the parts had somewhat diminished in size and a fresh application was made. This remained in place till the 10th of February, 1877.

The patient was discharged on the 14th of March with a slight stiffness in the joint. When seen in December last, all traces of the accident had disappeared.

TREATMENT OF ERYSIPELAS BY HYPODERMIC INJECTIONS OF CARBOLIC ACID. By Herman Hueter. (*Berl. Klin. Wochenschrift*, No 24, 1878.)

At the surgical clinic in Greifswald, subcutaneous injections of carbolic acid in traumatic erysipelas have been in use during the past year. In order to get along with the least quantity of the drug, great care is taken to attack the disease in the beginning. After every febrile attack in cases of wounds the parts are kept under observation and within some hours the diagnosis of erysipelas is usually established by a reddening of the edges of the wound. The wound is now thoroughly cleansed with carbolic acid, or if the appearance is unfavorable, with a five to eight per cent. solution of chloride of zinc. The solution used for hypodermic injections consists of carbolic acid and alcohol, ana 1.5, water 50 grams. One syringeful (1 C. C.) of this fluid diffuses itself under the skin to the extent of about one half the size of an ordinary card. For repeated injections the needle may be left in place, since the solution spreads very easily. While ordinarily three to eight C. C. have sufficed, Hueter has injected as much as twelve syringes without accident. By surrounding the entire border of the erysipelatous patch with a ring of fluid in the subcutaneous tissue, a further progress of the disease is at once checked. If the patch is large, a second series of injections within its borders, may be necessary, whereupon a speedy return to the normal pallor of the skin shows the disappearance of the disease. No better test of the efficacy of this method could be desired, than the repeated observation, that where the points of

injection were too far apart, the erysipelatous inflammation continued to extend in a peninsular shape between the protected portions.

Where red, hard cords indicate the existence of a lymphangitis, a thorough application of mercurial ointment along their tracks was found most servicable. For internal treatment there is rarely any call for this method.—*Allg. Med. Central Zeit. No.* 53–54–55, 1878.

Ophthalmology.

Incrustations of Lead upon Cornea and Conjunctiva. (*Journ. de Médecine, Nov.* 1877.)

In an article on visual troubles due to lead-poisoning, published in the *Recueil d'Ophthalmologie*, M. Galezowski, insists upon these latter accidents being due almost always to the use of collyria containing salts of lead in solution. These lotions are dangerous whenever the cornea or conjunctiva are ulcerated, the amorphous lead being precipitated upon the entire surface of the ulcer, where it is soon covered by a thin pellicle of epithelium which prevents its expulsion.

Lead deposits in the cornea are of most frequent occurrence, and give rise to the most inconvenience; those of the conjunctiva are less frequent and do not interfere with vision; they are usually the result of insufflations of powdered acetate of lead for ganular conjunctivitis.

Lead spots of the cornea present the form, usually, of chalky-white or pearl-colored opacities with well-defined borders. They are speedily covered with an epithelial pellicle which gives the surface a shining appearance. They are of little importance, except in so far as they occupy the central portion of the transparent membrane, when they require surgical intervention. Desmarres removes the incrustation by scraping with the triangular knife of Baer. M. Galezowski engages the knife flatways under the opacity and passes it between the transparent cornea and the opacity, gradually, until the latter is removed. The operation,

though painful, is not difficult. The pellicle is hard enough, usually, to allow it to be removed in one piece, and the wound left is even, shining, and cicatrizes perfectly without leaving a trace, and without a new opacity.

GLAUCOMA AND INCREASED OCULAR TENSION.—From a recent summary in the *Dublin Jour. of Med. Sci.* (June, 1878), we take the following:

Papers have been published by Knies and Weber to the effect that the chief factor in this affection is interference with the drainage of the eye. The former insists that the obliteration of the canal of Fontana plays an important rôle; and the latter concludes that in all forms of the disease the drainage channels become narrowed and finally occluded.

Recently Dr. Stilling has experimented by ligaturing the optic nerve. At first this was followed by neuro-paralytic symptoms; after five or ten days there took place enormous increase of tension, anæsthesia of the cornea and increased fluidity of the vitreous.

He would divide the malady into—glaucoma anticum—due to obstruction of the anterior drainage system as well as Fontana's canal; and glaucoma posticum—depending on obstruction in the vascular sheath of the optic nerve.

Mr. Brailey, of London, has found marked and universal changes in the ciliary body, the circular fibers being specially affected or almost completely atrophied. He closes thus: "It is extremely likely that the ciliary muscle has functions besides that of accommodation, and that it may be concerned in regulating the blood supply. This might explain the effect of an atrophied ciliary muscle in passively keeping up an increased tension, notwithstanding that the periphery of the iris has never been united to the cornea.

THE last words of Velpeau: *Il faut toujours travailler, mes amis.* (My friends, we must ever be working.)

Items.

INDIANA, ILLINOIS AND KENTUCKY TRI-STATE MEDICAL SOCIETY.—The fourth annual meeting of this society, will be held in the city of Springfield, Ills., November 13, 14 and 15, 1878, commencing at 11 a. m., 13th.

Extract from plan of organization.—"All members in good "standing of any local, county, district or State medical societies, "auxiliary to the American Medical Association, may become "members on payment of the fees and a vote of the society.

G. W. BURTON, M. D., Secretary, Mitchell, Ind.

B. M. GRIFFITH, M. D.,
Chairman Com. Arrangements, Springfield, Ills.

THE "ANNUAL CIRCULAR AND CATALOGUE OF THE COLLEGE OF PHYSICIANS AND SURGEONS, city of Keokuk, Iowa," an affair of eight pages, is again before us. From it we learn that "J. C. Hughes, M. D.," is President of the Board of Curators, Professor of the Institutes and Practice of Surgery and Surgical Clinics (sic), Dean of the Faculty, and also Surgeon-in-charge of the Medical and Surgical Infirmary and Eye and Ear Institute. "J. C. Hughes, Jr., M. D.," is Professor of Anatomy, and, also, as appears from an advertisement on the eighth and last page of the "Circular and Catalogue," has "a large and complete assortment of surgical instruments. Orders promptly attented (sic) to." Four other gentlemen make up the list of professors, two of them, we are told, are now in Europe, but will return "ripe with experience and ready to impart all the old, and everything new which their observation may add as an improvement in the departments over which they preside."

We make the following excerpta from this "Circular and Catalogue" without comment: "Years of experience has (sic) proved the great advantage of extemporaneous lectures." . . . "Board can be obtained in the city at from $2.00 to $4.00 per week, *owing to the accommodations!*" "Text-books: *Cruvilhier* (!), *Aitkin* (!), *Erichson* (!), *Rockatansky* (!), *Cazeau* (!)."

The announcement of the spring session for 1879 lacks its verb. In the name of Hippocrates and Galen, let us pray that it will lack nothing more! Fees for the Course, $20.00!

LOCUST OIL.—Analysis and examination of the dead Rocky Mountain locusts by the United States Entomological Commission show that these insects furnish a new oil which will be christened *caloptine*, and a very large percentage of pure formic acid. Though this acid exists in the ant and some other insects, it is with difficulty obtained in large quantities; whereas by the action of sulphuric acid upon the locust juices, it passes off with great readiness, and in remarkable quantity and gravity. The various uses of this acid as a therapeutic, etc., are capable of great and valuable extension, where it can be obtained so readily, and in such quantity.—*Druggists' Circular.*

THE introductory lectures to the regular winter courses of the medical schools in this city are announced as follows: For the Chicago Medical College, by Dr. Wm. E. Quine, on the evening of the 1st inst.; for the Woman's Hospital Medical College, by Dr. W. Godfrey Dyas, on the evening of the 2d inst.; for Rush Medical College, by Dr. James Nevins Hyde, on the evening of the 1st inst.

WE have received the printed inaugural dissertations of two Milwaukee physicians, presented for the degree of the doctorate in the Ludwig-Maximilian University, of Munich; one, that of our correspondent, Dr. Nicholas Senn, on the subject of Varicocele; the other, that of Dr. Alois Grætinger, on Placental Arrest after Labor at Term.

ANNOUNCEMENTS FOR THE MONTH.

SOCIETY MEETINGS.

Chicago Medical Society—Mondays, Oct. 7 and 21.
West Chicago Medical Society—Mondays, Oct. 14 and 28.

CLINICS.

MONDAY.

Eye and Ear Infirmary—2 p. m., Ophthalmological, by Prof. Holmes; 3 p. m., Otological, by Prof. Jones.
Mercy Hospital—1:30 p. m., Surgical, by Prof. Andrews.
Rush Medical College—2 p. m., Dermatological and Venereal, by Dr. Hyde; 3 p. m., Medical, by Dr. Bridge.
Woman's Medical College—2 p. m., Dermatological, by Dr. Maynard.

TUESDAY.

Mercy Hospital—1:30 p. m., Medical, by Prof. Hollister.

WEDNESDAY.

Chicago Medical College—1:30 p. m., Eye and Ear, by Prof. Jones.

THURSDAY.

Eye and Ear Infirmary—2 p. m., Ophthalmological, by Dr. Hotz.
Chicago Medical College—1:30 p. m., Medical, by Prof. Quine.

FRIDAY.

Mercy Hospital—1:30 p. m., Medical, by Prof. Davis.

SATURDAY.

Rush Medical College—2 p. m., Surgical, by Prof. Gunn.
Chicago Medical College—2 p. m., Surgical, by Prof. Isham; 3 p. m., Neurological, by Prof. Jewell.

Daily Clinics, from 2 to 4 p. m., at the Central Free Dispensary, and at the South Side Dispensary.

THE

Chicago Medical Journal

AND

EXAMINER.

VOL. XXXVII.—NOVEMBER, 1878.—No. 5.

To our Readers and Correspondents.

Beginning with Vol. XXXVII., July, 1878, the CHICAGO MEDICAL JOURNAL AND EXAMINER prints all records of length and weight in terms of the Metric System, and all records of temperature in degrees of the Centigrade Scale. The Metric System, legalized in the United States and Great Britain, is extensively or exclusively employed by other civilized nations, and has thus become an essential part of the international language of science. It is recommended for adoption to the profession in this country by the American Medical Association and other scientific bodies. To-day no physician can afford to be ignorant of its value, its simplicity and the meaning of its terms.

The subjoined tables and scales, which have been kindly prepared for us by Prof. W. S. Haines, will be continuously reproduced in subsequent numbers of this journal, for the ready reference of our readers and correspondents.

Metric Measures of Length.

Millimeter	0.001 of a Meter	0.03937	inches.
Centimeter	0.01 " "	0.39370	"
Decimeter	0.1 " "	3.93707	"
Meter	**1.**	**Meter**	**39.37079** "
Decameter	10.	Meters	393.70790 "
Hectometer	100.	"	3937.07900 "
Kilometer	1000.	"	39370.79000 "

Metrical Weights.

Milligram	0.001 of a Gram	0.015	grains.
Centigram	0.01 " "	0.154	"
Decigram	0.1 " "	1.543	"
Gram	**1.**	**Gram**	**15.432** "
Decagram	10.	Grams	154.323 "
Hectogram	100.	"	1543.234 "
Kilogram	1000.	"	15434.348 "

☞ The United States "nickel" five cent piece weighs five grams, and is two centimeters in diameter.

Approximate Equivalent of Metrical Weights.

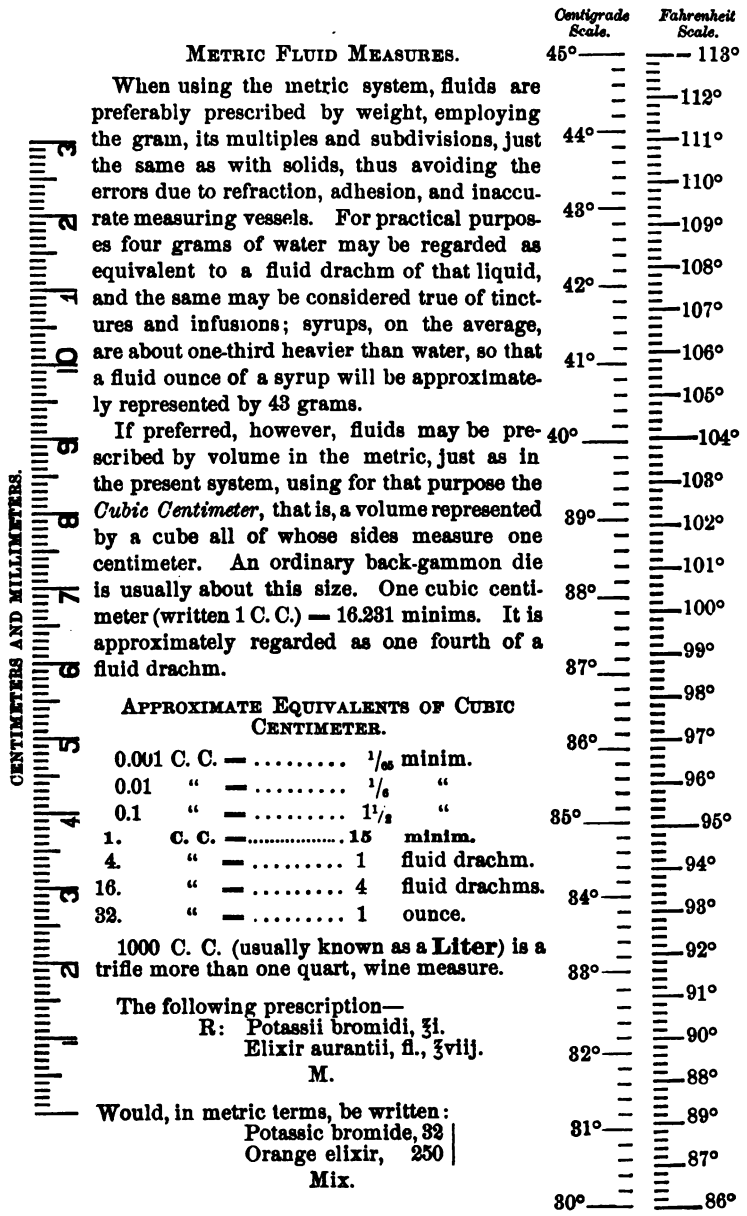
For Rapid Reference.

Milligrams.	*Grains.*	*Decigrams.*	*Grains.*
1 (written 0.001 or |001)*	1/65	1 (written 0.1 or |1)	1 1/2
2	1/32	2	3
3	1/22	3	4 1/2
4	1/16	4	6
5	1/13	5	7 1/2
6	1/11	6	9
7	1/9	7	11
8	1/8	8	12 1/2
9	1/7	9	14

Centigrams.	*Grains.*	*Grams.*	*Grains.*
1 (written 0.01 or |01)	1/6	1 (written 1. or 1|)	15
2	1/3	2	30
3	6/13	3	46
4	7/11	4	61
5	3/4	5	77
6	9/10	6	92
7	1	7	108
8	1 1/4	8	123
9	1 1/3	9	139

A Kilogram—2 1/5 lbs. Avoirdupois.

* The decimal *line* instead of points makes errors impossible.



Metric Fluid Measures.

When using the metric system, fluids are preferably prescribed by weight, employing the gram, its multiples and subdivisions, just the same as with solids, thus avoiding the errors due to refraction, adhesion, and inaccurate measuring vessels. For practical purposes four grams of water may be regarded as equivalent to a fluid drachm of that liquid, and the same may be considered true of tinctures and infusions; syrups, on the average, are about one-third heavier than water, so that a fluid ounce of a syrup will be approximately represented by 43 grams.

If preferred, however, fluids may be prescribed by volume in the metric, just as in the present system, using for that purpose the *Cubic Centimeter*, that is, a volume represented by a cube all of whose sides measure one centimeter. An ordinary back-gammon die is usually about this size. One cubic centimeter (written 1 C. C.) — 16.231 minims. It is approximately regarded as one fourth of a fluid drachm.

Approximate Equivalents of Cubic Centimeter.

0.001	C. C. —	$^1/_{65}$	minim.
0.01	" —	$^1/_6$	"
0.1	" —	$1^1/_2$	"
1.	C. C. —	15	minim.
4.	" —	1	fluid drachm.
16.	" —	4	fluid drachms.
32.	" —	1	ounce.

1000 C. C. (usually known as a **Liter**) is a trifle more than one quart, wine measure.

The following prescription—

R: Potassii bromidi, ʒi.
Elixir aurantii, fl., ʒviij.
M.

Would, in metric terms, be written:

Potassic bromide, 32 |
Orange elixir, 250 |
Mix.

Original Lectures.

THE NURSE-MAID AND THE MOTHER OF THE SYPHILITIC CHILD.

(A Clinical Lecture Delivered at the Dermatological and Venereal Clinic, Rush Medical College.)

By James Nevins Hyde.

Reported by L. C. Waters, Clinical Assistant.

I.

Gentlemen: You see this fresh-looking, blonde German girl, 14 years old. One week ago she came to me, accompanied by her mother, complaining of pain in her left side, and showed what looked like ulcers between several of her toes. They were really not ulcers, but, when superficially examined, might have been mistaken for such lesions. I examined her heart, and found that, although pulsating 120 times each minute, there was no valvular or other organic disease. She was probably somewhat alarmed by the fact of her presence in this place, and the fear of what might follow—this in part explained the acceleration of the pulse.

I will say here, that as soon as I looked at these interdigital sores, I recognized their character and import. Almost anyone, accustomed to careful inspection and mental classification of cutaneous lesions, could have done the same thing readily. But I want to call your attention to the ease with which we might have made a grievous blunder in this case. We might have said carelessly: "here is a young girl with sore toes and a pain in her left side—possibly neuralgic. She cannot give us any reason why she should suffer this way. We will therefore give her a

salve for her ulcers, and a remedy for her neuralgia or cardialgia, and dismiss her for a week."

But we did not say nor do this. We pushed our investigation of the case till its origin and character were as clear as it was possible to be to us, whose facilities for such investigation are limited to this room. As she is now before us, we will first examine her physically, and then give her history.

I pass my hands along the back of her neck, and find here that the lymphatic glands, situated along the intermuscular septa, are moderately enlarged, but not tender. Two glands, one on either side of the nucha and just below the occiput—the sub-occipital glands—are as large as walnuts. This is a significant symptom. Looking into the throat, I find hyperæmia of the pharynx, and each tonsil enlarged to double its normal size. Upon the right pillar of the fauces is a superficial ulcer with purulent floor, as large as the section of a small split pea. The tint of her skin is delicately clear, yet, over the right arm, and in one or two places over the legs, are some small, irregularly dispersed, pin-head sized reddish papules, which have been scratched with the finger nails. We know this, because we find a little blood scale at the apex of each, and scratch lines in the vicinity. Exposing the genital organs, you see upon and about the vulva and the vulvo-crural integument, 10 to 12, irregularly oval, elevated and flattened patches, from 1 to 3 millimeters in height, and from 2 to 3 centimeters in diameter. One, situate upon the right labium minus, has so irritated the tissue beneath, that the lip is puffy and œdematous. All are now flesh-colored in hue, and though moist, destitute of much secretion. One week ago they were nearly as white as apple blossoms, and smeared over thickly with an offensive mucous secretion, of which I will remark, parenthetically, that it is in the highest degree capable of communicating the disease from which the patient is suffering. Six to eight more of these lesions surround the anus, similar in size, aspect and configuration. The inguinal glands of each side are enlarged and painless.

Let us stop to say a word about these vulvo-anal lesions. What name shall we give them and to what family do they belong? They have been variously called: (*Die breite Çondylomata, die*

feuchten oder nassenden Papeln, die flachen Condilome, papules humides, pustula fœda ani, pustules plattes, plâques muqueuses), mucous patches, condylomata and mucous tubercles. They belong to the family of the papules, and are, in fact, giant papules with flattened apex and secreting surface—giant, because they form in regions where heat and moisture favor their extreme development—flattened, largely because they form in regions where they are subjected to friction and contact of apposed surfaces—secreting, because these regions are hot, moist and subjected to friction. Now look at the interdigital lesions upon the feet, which I said, a moment ago, could readily be mistaken for ulcers. Between the second and third, and between the fourth and fifth toes of this right foot, largely on the dorsal border of the quasi-mucous surfaces in apposition, you observe in each locality, not an ulcer, but an elevated lesion as large as a little finger nail, elevated as far as the skin of the lateral surface of the adjacent toe will permit, moist and secreting at the summit, but less moist and secreting less than the lesions about the vulva and anus. These also, during the last week, have lost some of their classical features—the improvement being due to the treatment pursued, of which I shall speak later. Similar, but less typical tubercles you see also between the toes of the left foot.

All the lesions I show you are identical in character. They are mucous patches, mucous tubercles, condylomata, or giant flattened papules. You may call them what you will, if only you understand the fact that they result from lawless or perverted cell development in parts where there is heat, moisture and friction, this lawlessness or perversion being due to the influence of the syphilitic virus, whose features in this case many of you have ere this probably recognized. The occurrence of these and allied lesions, is so constant and characteristic in the secondary stage of the disorder, that Zeissl proposed to call the latter the "condylomatous stage" of syphilis.

The recognition of this disease, gives us an explanation of the thoracic pain, of which the patient at first complained. Substernal and subcostal pains are frequent in the early periods after syphilitic infection. They are, in general, I believe, a nervous

protest against the circulation and distribution of hydræmic and intoxicated blood.

Let us stop for a moment to enquire why we find upon the skin of this young girl, such an abundant development of mucous tubercles, while upon the skin of the next patient we chance to examine in the early period of development of constitutional syphilis, we may discover a symmetrical macular eruption over the face and chest, out of which may spring an equally distributed crop of papular or papulo-squamous syphilides. I think there is an explanation. This girl is of an age which entitles her to be classed with infantile patients. Infants and children have delicate skins, built up of rapidly growing cells, abundantly supplied with nutrient juices; and their skins, under the influence of acquired syphilis, have a marked tendency to exhibit mucous lesions. The sex also is to be considered. Even without experience, reason would lead us not to look in these patients, for those classical symptoms which are displayed on the skin of the adult male, toughened by long exposure to friction during toil, at a period of life when cell growth is strictly limited to the demand for repair of daily waste.

Let us ask further how this child came to be affected in this way. She is but 14 years old, and has a remarkably innocent expression of countenance. It is difficult for us to believe that she has sinned sexually at her age, and her genitals bear no marks of indecent assault. I have questioned her in private, and can assure you that she is, in fact, as innocent as she is in appearance. I asked her if she had been at service as a nurse girl, and she answered that she had not. While making these inquiries, I carefully examined the epitrochlear glands of her arms—those found just above the inner condyle of the humerus, named by Chaussier, the epitrochlea—and found that that of the right side was enlarged, the left was unaffected. This certainly was significant. Further questioning elicited the fact that five months ago, she paid a two months' visit to an aunt in the country—her mother's sister. This woman, having lost a first husband, was united to a second husband two years ago, and was nursing a little three months old baby at the time of this visit to the country. The baby had been ill from the moment of its

birth, and had a very sore mouth, "so sore that its mouth was kept constantly open." Our patient is positive that she never kissed this child—its mouth was so repulsive; nor had she ever slept with it.

The mother of our patient, who accompanies her, is evidently entirely in the dark as to the nature of her daughter's malady—as much so, indeed, as the daughter herself, who at first believed that she had "the whites." This woman is a widow, of healthy appearance, a mother of seven healthy children, who has never aborted. She denies the possibility of any venereal disease in her case, and is stricken with horror when informed as to the real character of her daughter's trouble. Then her memory is stimulated to the recollection of the fact that her son had told her that the father of the baby to whom we have reference, was affected with a "bad disease" at about the time of his marriage, and that his wife had been taking medicine for the same reason.

I think it is safe to assume that this infant had hereditary syphilis. It was of that age when we may look for manifestations of the disease. An infant suffering from mucous patches of the nasal and buccal cavities, is very apt to keep the mouth open, not because the mouth is sore, but because the nostrils are obstructed by the crusts which form there, and impede respiration. The offensive secretion from the mouth and nostrils of these little patients, is highly contagious. We will not now discuss the question whether this secretion is contagious for the parents of such a child; it is sufficient at present to know that for all others, unaffected with syphilis, this discharge is potent for mischief. It is true that this fact has been disputed by one author, but the proof against him is overwhelming. How can such children infect other individuals? I answer, by the act of kissing, by the mediation of spoons and utensils carried directly from the child's to another's mouth (tasting its pap, etc.), by the innocent contacts of sleep, and, as lately reported in one instance, by the aid of the finger of the infant, which was habitually sucked, and then thrust into the mouth of its nurse. We must not, of course, forget the contact of the child's mouth with the nurse's nipple, nor the possibility of conveying blood or pathological products from arm to arm in the process of vac-

cination. Professor Goodell, of Philadelphia, has recently stated that the liquor amnii of such infants at birth, is dangerous for the accoucheur.

By none of these methods was our patient infected. She is quite sure that she never kissed that offensive mouth. But, on further questioning, she admits that she carried this child, and often played with it, and, being pressed to state if she ever suffered from any wound at this time, she admits that she cut her hand upon a piece of glass. She points out to us the location of this wound, and lo, here we have revealed the site of her chancre, and the origin of all her subsequent trouble. You see upon the radial border of her right thumb, over the metacarpo-phalangeal articulation (that of the arm where we found the enlarged epitrochlear gland), a smooth elevated indurated nodule, oblong in shape, and as large as a pea, as resilient to the touch as if a smooth kernel of ivory were imbedded in its substance, and of an empurpled reddish hue, suggestive of blood-stasis and pigment. The wound inflicted by the glass, was doubtless in some way infected by contact with the secretion from the mouth of the infant she was then tending. Here was once then a chancre. But the wound has healed, and the chancre, if ever it ulcerated, has also healed, leaving us only this lesion—insignificant enough when carelessly viewed, but highly significant when carefully studied, to tell us by what portal the virus of the disease gained access to her lymphatic circulation.

Now, let me say of all these extra-genital chancres, that they are formidable only as they are liable to escape recognition. The syphilis which is dangerous, is the syphilis which has long been unrecognized. These extra-genital "initial scleroses," as the Germans call them (a good name, by the way), have two, and only two tolerably constant characteristics: first, induration; second, a vinous-red or purplish stain. Their configuration size and morphology, depend almost entirely upon the peculiarities of the pre-existing wound or abrasion, and we find such pre-existing wounds or abrasions, in well nigh every case. They may be irregular, scabbed, crusted or exulcerated sequelæ of typical vaccine vesicles; they may be curious alterations of simple fissures of the nipple or its areola; they may be mere dry scaly

papules of the skin. I have recently treated three physicians in the vicinity of this city, for syphilis originating with chancres of the hand, produced by inoculation in gynecic or obstetric manipulations. At the time of my first examination, one had a deep, empurpled, indurated and thickened cicatrix of the finger; a second had a superficially ulcerated abrasion of the knuckle, resting upon a slightly indurated and elevated base; a third had a red and angry looking dense nodule, resulting from a "hang-nail."

Returning now to our patient, let us dwell for a moment on the question of the date of her infection. By the aid of her memory alone, we cannot fix this date. But we find that we have a latititude of from three to five months in which to allow for the two periods of incubation. For the period of incubation of the initial sclerosis, we may have from ten days to an entire month, and even more. For the period of secondary incubation, that which succeeds the appearance of the chancre, and extends to the date of the first appearance of constitutional symptoms, we may have from twelve days to three months, and even more. Loosely speaking, we may say that this generally requires about fifty days. Now I am quite sure that this child must have suffered from her disease for some time before her attention was directed to it. She was not expecting its advent, and it was not probably till it forced itself upon her attention, that she really concluded that she was ill. The time, therefore, between her visit to us and her primary accident, may be brought within the average usual in such cases.

Do you ask, why then was her initial sclerosis evident when she first exhibited constitutional disease? I answer that this is common. In nearly one half of all cases, especially of untreated cases, we can find the characteristic induration remaining when the first explosion of the general disease occurs. The more extensive the induration, the longer its survival. Often upon the genitals we find ulcerated chancres co-existing with syphilides of of the skin. The chancres have then survived their usefulness as nests of lawless cells. They are, indeed, no longer chancres —they have been transformed, altered in aspect and character, as Fournier has well shown. They have become secondary acci-

dents—most often have been changed into elevated mucous patches or giant papules. There is then nothing anomalous in our discovery of this little nodule on the girl's finger at this time.

We thus conclude at the very point where the syphilitic history of our patient began; and, unless I am mistaken, all obscure histories are to be followed up in pretty much the same way. By the course pursued, we have done something else beside gaining instruction for ourselves. We have established by evidence that ought to be received in a court of law, first, the good moral character of this young girl, second, the guilt of the author of this chain of calamities, by which three presumably innocent individuals have been infected with a loathsome disease.

Lastly, we have been enabled, by recognizing the character of the malady, to put our patient on the road to a prompt recovery. I have already called your attention to the influence of a single week of treatment. We gave her mercury internally, and merely directed her to wash the affected parts carefully with soap and water, and afterwards to dust some dry calomel over the patches. This is a sufficiently simple treatment. In private practice, we should probably have been urged to pursue the most energetic measures possible, and then we might have subjected the patient to the fumes of mercury in a vapor bath. In the large cities we often send such cases to the bath houses, when we are sufficiently fortunate to find those the proprietors of which will not tamper with our patients. But this is rare enough. Those of you, however, who may practice in localities where these vapor bath establishments are not accessible, can accomplish the desired end, equally well though with more trouble, by the extemporaneous aid of a blanket, a kettle of hot water to supply vapor, a spirit lamp and a tin plate containing calomel or cinnabar, or the two in combination.

By these measures we can readily bring about the disappearance of the external leisons. Then should follow a continued, faithfully conducted, gentle course of mercurial medication, never pushed to the production of salivation or any other of the toxic effects of the metal, but pursued so that nutrition may be encouraged rather than impaired.

II.

The next patient before you is a woman of respectable appearance, 43 years of age, living with her husband, in the nineteenth year of her marriage. She tells us that in about one year and a half after her marriage her troubles began with an ulcerated sore throat, soon followed by what she describes as an attack of paralysis on the right side. In 1858, she had an attack of asthma, from which she entirely recovered. Since 1872 she has suffered from frequent attacks of what she calls "inflammatory rheumtism," affecting chiefly the extremities. For fifteen years she has suffered from ulceration affecting the right leg, and, now that she has removed from it the dressings, you can see what a deformed and useless member it is. During all these years a battle has been raging between ulceration and repair over almost its entire surface, and until very lately the destructive forces have had the better of the contest. At present you can see only eight or ten clean-cut, circular, granulating ulcers, in size varying from a silver quarter to a half of a dollar, distributed irregularly from below the external malleolus to the tubercle of the tibia. But, extending from each of these in various directions you can see well defined disks, with borders as clearly rounded as the lip of a saucer, made up of young, newly formed and imperfectly formed epidermis. These are the beds of old ulcers, let in, as it were, beneath the sound integument to the depth of one or two millimetres, just now flesh-colored in hue. If she continues to improve, these will eventually show as typical scars, at first pigmented, afterwards of a dead white color, unattached to the deeper tissues, capable of being pinched up between the finger and thumb, and showing by reflected light a certain degree of lustre.

Long disuse of this limb has brought about atrophy of the muscles, and a general feebleness of all the elements which make up its structure. There is no calf of the leg—it is of about the same circumference from below the knee to the ankle. At first the disuse and a dependent position, aided probably by bandages wrapped around the leg and not the foot, induced œdema of the foot—a puffiness, into which the finger could be pressed for some distance. But the years have changed all this. Hyperplastic exudation has transformed this foot into the swollen, dense and

almost shapeless mass you now see before you—seamed with deep furrows, where once were the normal lines of depression, and bulging out here and there in masses, upon which my finger pressing with considerable force makes no impression. It is quite suggestive of elephantiasis, but it is a simple hypertrophy, due originally to the gravitation of the blood.

I now apply this eight-yard bandage snugly from the toes to the knee, covering in the ulcers and their dressings. This will aid in bringing about resorption of the plastic effusion in the foot, and in permitting the ulcers to heal by relieving them of blood pressure in excess from above. She finds the limb thus dressed far more comfortable.

(The patient was then removed from the room at the request of the lecturer.)

The woman who has just left us, gentlemen, is suffering from syphilis. She, however, suspects neither the cause nor character of her complaint, and I know of no good object to be gained by informing her of the facts. I have never asked her a question about the origin of her disease. It was Mr. Hutchinson, of London, I believe, who said that it was a useless cruelty to ask a a married woman if she had ever suffered from syphilis. Moreover, her statements, either upon one side or the other of such an enquiry would be without value to us. We know more upon this subject than she is in position to know. The mucous tract of the the vagina and vaginal envelope of the cervix is extensive; and primary syphilitic lesions here are often insignificant, short-lived and entirely unrecognized by women who are thus infected.

On the evidence furnished by this leg alone, we could affirm this woman to be syphilitic. But on this scrap of paper in my hand I have further interesting corroborative evidence taken from her own lips. It is a record of her pregnancies, and reads as follows:

1*st Pregnancy*—Boy and girl, twins; born at full term in 1861. Living at this date, and in good health.

2*d Pregnancy*—At the seventh and one-half month; miscarriage, in 1865.

3*d Pregnancy*—At full term, a boy; still-born, 1866.

4th Pregnancy—At full term, a boy; 1867. He lived to be eleven months old and died of "catarrh in the head."

5th Pregnancy—At full term, a girl; 1868. She died when nine months old; cause of death unknown.

6th Pregnancy—At full term, a boy; 1869. Now living.

7th Pregnancy—At full term, a girl; 1870. Died when nine months old; "teething."

8th Pregnancy—At full term, a girl; 1874. Died when four months old of "difficulty with the lungs."

9th Pregnancy—At full term, a girl; 1876. Died when three months old; "teething."

What a record! To him who can read it aright it tells a tale of marital infidelity, syphilis and the blighting effect of the parents' disease upon the fruit of their union. More, it tells, within a few years, of the date when the poison began to do its work. Let us examine it somewhat in detail.

It is clear that both parents were healthy when the first pregnancy was terminated. The twins then born are still living and healthy. About one year and a half after the marriage the mother had an ulcerated sore throat, the probable result of syphilis contracted from her husband after the birth of these children. Now, when both parents are syphilitic, and the syphilis of the wife is unrecognized and untreated, what is the general result so far as regards gestation? First, we have abortions from a blighted embryo. Then, as the years roll by (and, as you know, measuring by pregnancies means measuring by years), we have still-births; then a series of children born who survive but a few months. Lastly (as there is an end to almost everything in this world, even to the power to transmit syphilis to one's offspring, thanks to the conservatism of nature), we find children born who survive childhood but are yet apt to betray symptoms of the disease.

Now, look at the series in this instance occurring after the birth of the twins, and after the syphilitic infection we have demonstrated. First, a miscarriage; then a still birth at term; then a baby, who expired in its eleventh month, suffering from "catarrh in the head," as she called it—probably the snuffles from mucous patches in the nostrils;—then a child, who did not

survive its ninth month; then came a boy, who is still living. At this point must have occurred one of those periods of repose which we constantly observe when syphilis is waning. The fury of the storm was over. But I have taken pains to examine this boy carefully—as he is not here, you will have to take my word for the truth of my statements—and his central upper incisor teeth are clearly pegged and notched, in the manner described by Hutchinson as typically characteristic of hereditary syphilis. After this boy were born three girls. All of them died of diseases to which we get no clue from the mother—they probably suffered from obscure visceral lesions due to infection. Look at the net result. One boy, the sole survivor of eight impregnated ova, after the first gestation with twins. How fatal should we consider an epidemic that could thus so nearly destroy an entire family!

The mother, who has just left us, is improving rapidly under the administration of the potassium iodide, of which she has gradually been enabled to take four grams daily. She is even enabled to get about on her feet for the first time in years. Had she been treated earlier, and her husband subjected to the same treatment, some of their children might have been saved. But she is approaching the period of the menopause, and the past is irrevocable. Locally we are dressing her ulcers with a weak mercurial ointment.

We have made no special investigations of the effect of quinia given in *diseased* conditions. In one case of syphilis which we observed, there was a marked increase in the red corpuscles 1,043,130 under the administration of cinchona sulphate.

There was in *health* a slight diminution in the number of red corpuscles and a marked increase in the number of the white, after the administration of a large dose of quinia sulphate. (Drs. Cutler and Bradford, *Amer. Jour. of the Med. Soci.*, Oct., 1878.)

Original Communications.

MEDICAL GYNÆCOLOGY.

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A common complaint made by young physicians, is, that they are unsuccessful in the local treatment of uterine diseases. This complaint is "common" because errors in, or omission of, proper treatment additional to local applications, is "common." Physicians who commence practice with the frequently-entertained, but exceedingly erroneous, idea, that the uterus is the *fons et origo mali* in all "female diseases," and that "local treatment" is *the* curative means to be instituted for curing them, will prove to be unsuccessful practitioners, or will very soon change their ideas of the pathology of these disorders, and change their treatment.

It is exceedingly rare to find a so-called gynæcological case that does not present some serious departure from health in some organs or functions other than those peculiar to the sex of the patient.

Any physician, unmindful of the universality of this fact, who will examine carefully in detail, in the first score of gynæcological cases, the *nervous, respiratory, circulatory, digestive and urinary systems*, and the general conditions presented by them of each patient, will be profoundly impressed with the idea that the symptoms of uterine disease are but a portion of the conditions demanding his attention. This is a point that, in gynæcology, has been much written upon in the past generation. No review

of the opinions, on the relations of the disorders of the female generative organs to the general conditions referred to, is here intended. These opinions are accessible to any physician, who can read them himself. It may not be superfluous, however, to state that some authors have affirmed that the maladies of the female generative organs produce the general symptoms from which these patients suffer. Cure these generative maladies, and the general symptoms will be removed, they claim. Then, again, other authors have denied that gynæcological disorders produce general symptoms. These two classes of pathologists have written and argued over this point till severe things have been said of writers, till hard names have been called, till, in one instance, a professor went so far as to take another author's book into the lecture-room, and, before a class, to denounce the writer and his ideas, and then to tear up the book and, in a rage, to fling its fragments on the floor. As early as the beginning of this century gynæcologists had ranged themselves into two parties, which are distinct and separate to-day. They maintain their positions as resolutely as though they were dealing with a question of national finance or church polity, and nothing has budged them from their convictions.

As is usually the case in such contests, one party is right in some cases, and the other party is wrong; in other cases their positions are reversed, and, in still other cases, both parties are wrong, the truth lying midway between them. Every gynæcologist has seen cases where local treatment has cured the local trouble and removed the general symptoms. He has seen cases where protracted treatment has improved the uterine condition, and, not at all, or only very slightly, improved the patient as to general symptoms. Then, again, he has treated cases fruitlessly for a long time, when, upon resorting to medicines in addition to local applications, he has found his patient's condition improve at once. This good result, and this negative result from local treatment used alone, I have seen so often and so discouragingly, that, for investigation, I have been in the habit for a long time, through the efficient assistance of Dr. B. W. Griffin, of taking very complete histories of my cases at the Central Free Dispensary. What this work may lead to I am unable to predict,

but I can say that it has modified my practice to such an extent that the administration of medicines forms a large part of the treatment used. Where an alimentary canal trouble, as indigestion, costiveness, constipation, etc., exists, medicines are administered to correct this departure from health. Where rheumatism or syphilis or scrofula, anæmia, or that Protean monster, the gouty vice, is met with, appropriate remedies are given. It matters not whether a disorder be met with in the *nervous alimentary*, *respiratory*, *circulatory*, *renal* or *cutaneous system*, some remedial measures, in all gynæcological cases, besides local treatment, must be resorted to.

To illustrate the universality of general symptoms in gynæcological patients, 50 cases, as they came to the dispensary, are herewith presented. They are not selected—they are consecutive cases. Fifty only are presented, because that number illustrates the end sought as well as fifty thousand cases would illustrate it. These patients are such as are met with in a large cosmopolitan dispensary and are, of course, from among our poorer classes, acquainted with hard work, privations, scant tables and garments, and, in many instances, with an unbroken series of years of either gestation or suckling. These cases, taken from the case sheets numbered consecutively, ran back from date—August 20, 1878, till the requisite number has been reached.

Case taking has been followed, in this dispensary work, with rigid uniformity. First, is annotated what the patient of her own accord complains of; in most instances her own words are used, enclosed in quotation marks. It is instructive to notice the universality of abnormal sensations described. A pain somewhere is invariably complained of. After the patient has delineated her complaints, the real work of case taking is begun. The various systems of the human organism are carefully questioned in topographical order, from above downwards. First the *nervous* system is examined, second the *alimentary*, third the *respiratory*, fourth the *circulatory*, fifth the *renal*, sixth and lastly, the *cutaneous*. Under the nervous symptoms are noticed all pains and abnormal sensations arising from any cause whatever. The more elaborate means used in questioning the nervous system were not resorted to.

Under all of the other divisions is annotated whatever is found that can be properly classed thereunder. Occasionally a symptom is found which can be classed under one of two divisions—*e. g.*, *vertigo*, which may be be considered a *nervous* or a *circulatory* symptom.

Following this, is an examination of heredity, family diseases and idiosyncrasy. Next, the patient is examined with regard to the functions and organs peculiar to her sex, menstruation, abnormal vaginal discharges, and the condition of the uterus and its annexæ. It will be observed that the last class of symptoms is entirely omitted from the table herewith presented. Only those symptoms are given which are observed aside from the gynæcological aspect of the cases:

No. of Case and Diagnosis.	Nervous.	Alimentary.	Respiratory.	Circulatory.	Renal.	Cutaneous.	Remarks.
CASE 1. Endocervicitis.	Frontal and occipital cephalalgia. Lumbar rachialgia. Thoracic muscular pains. Pains in epigastrium, hypogastrium and ovarian regions.	Tongue coated white. Bad taste in mouth mornings. Gastric indigestion. Tympanites. Constipat'n (tri-weekly evacuations). Occasional hæmorrhoids.	Chronic post-nasal catarrh.		Urine deposits reddish brown sediment.		
CASE 2. Endocervicitis.	Frontal, coronal and occipital cephalalgia. General arthritic pains Burnings in soles of feet. Numbness of hands and forearms.	Bad taste in mouth mornings.	Chronic post-nasal catarrh.	Frequent palpitation. Vertigo occasionally.	Urine deposits heavy mucous precipitate. Urinates far too frequently.	Has brown spots under skin of face.	Says she "has had rheumatism for years."
CASE 3. Subinvolution.		Foul breath and very bitter taste in mouth mornings. Anorexia mornings. Tympanites evenings.					Supposed cause is her last labor.
CASE 4. Split Cervix (double) Hyperplasia.	Frontal and occipital cephalalgia.	Thickly coated tongue, white. Bad taste in mouth. Gastric indigestion. Tympanites. Left lobe of liver enlarged.			Urination followed by pain along ureters for two or three minutes.		
CASE 5. Hyperplasia and catarrh of uterus.	"Rheumatism" in the shoulder. Lumbar and sacral rachialgia.	Brown tongue. Bitter taste in mouth. Anorexia. Obstinate constipat'n always demanding cathartics.		Occasional vertigo.			Stands erect with difficulty. Walking or riding produces great pain in lumbar region.
CASE 6. Uterine Catarrh and Hyperplasia, and urethral vascular tumor.	Coronal and occipital cephalalgia. Sacral rachialgia. Frequently has shooting pains all over.	Gastric indigestion. Tympanites. Constipation.		Occasional palpitation and vertigo.	"Passes water fifty times a day" and three or four times every night. Urine deposits uric acid.		

No. of Case and Diagnosis.	Nervous.	Alimentary.	Respiratory.	Circulatory.	Renal.	Cutaneous.	Remarks.
CASE 7. Endometritis and endocervicitis.	Frontal Cephalalgia. Lumbar rachialgia.	Tympanites.					
CASE 8. Endocervicitis.	Occipital, coronal and frontal cephalalgia. Thoracic, lumbar and sacral rachialgia.	Bad taste in mouth mornings. Occasional vomiting. Gastric dyspepsia.		Exertion produces palpitation.			Often has muscular rheumatism with hyperæsthesia.
CASE 9. Spammenorrhœa	Temporal cephalalgia on both sides.	Bad taste in mouth mornings. Yellow tongue. Anorexia by spells. Constant tympanites. Cannot eat eggs. Craves acids.	Exertion produces dyspnœa.	Exertion produces palpitation. Cold feet.			Has had rheumatism.
CASE 10. Amenorrhœa.	Constant frontal and temporal headache.	Bitter taste in mouth mornings. Obstinate constipation.	Exertion produces shortness of breath.	Palpitation produced by fright or exertion.	Lithic acid deposit in urine. Occasional pain over kidneys.		Has never menstruated. Has menstrual prodromata about middle of every month. Aged 17 years.
CASE 11. Endocervicitis.	Coronal cephalalgia. Lumbar rachialgia.						Had an indurated chancre in June, 1877. Says that every three or four weeks has sore throat unconnect'd apparently with menstruation, which occurs every four weeks.
CASE 12. Endometritis and endocervicitis.	Frontal cephalalgia. Sacral rachialgia	Bad taste in mouth mornings. Tympanites and constipation.		Occasional palpitation. Face flushes often and mind at same time becomes confused.	Lithic acid and mucous deposits in urine. Often feels too weak to hold her water.		Is sucklinga babe.

No. of Case and Diagnosis.	Nervous.	Alimentary.	Respiratory.	Circulatory.	Renal.	Cutaneous.	Remarks.
CASE 13. Split cervix and general hyperplasia of uterus.	Coronal cephalalgia. Weight at back of head. Lumbar rachialgia.	Gastric and intestinal indigestion. Great pain precedes bowel evacuations.		Occasional palpitations. Has cold feet a great deal.	Urine deposits mucus and lithic acid. Some days passes it every hour.		Locomotion exhausts her greatly. Can scarcely stand erect upon arising mornings.
CASE 14. Endocervicitis and chronic vaginitis.	Frontal and coronal cephalalgia. Has a sick headache every 4 weeks. Has hot and cold flashes all over.	Teeth reduced by caries to roots and stubs. Gastric and intestinal indigestion. Constipation.	Coughed a great deal, first and last.	Palpitation every day. Cold feet and legs.			
CASE 15. Ante-flexion, chronic endometritis and endocervicitis.	Muscular pains and occasional stiff joints.		Coughs and raises a little mornings. Bronchial congestion.		Urine deposits lithic acid.		
CASE 16. Endocervicitis.	Lumbar rachialgia. Vertigo.	Bad taste in mouth mornings. Obstinate constipation.		Cold extremities.			
CASE 17. Metrorrhagia.	Coronal cephalalgia. Thoracic rachialgia.	Bad taste in mouth mornings. Gastric and intestinal indigestion. Constipation. Has "summer complaint" every 2 or 3 weeks.		Much palpitat'n and cold extremities.			Locomotion produces palpitation, trembling and pains in legs.
CASE 18. Subinvolution.	Occasional frontal cephalalgia. Sacral rachialgia, exaggerated during menstruation.	Tympanites prior to menstruation.					Is spammennorrhœic. Pains in right knee 3 or 4 days before menstruation.
CASE 19. Endocervicitis.	Coronal cephalalgia.	Bad taste in mouth mornings. Gastric dyspepsia.					Suckling a babe. Is constantly tired.

No. of Case and Diagnosis.	Nervous.	Alimentary.	Respiratory.	Circulatory.	Renal.	Cutaneous.	Remarks.
CASE 20. Metrorrhagia.	Coronal cephalalgia.	Very yellow tongue. Anorexia. Occasional tympanitis.		Occasional palpitation and vertigo. Cold extremities.			Has had two attacks of rheumatic fever lasting 9 and 5 months respectively.
CASE 21. Prolapsus of bladder.	Coronal and occipital cephalalgia. Lumbar rachialgia.	Capricious appetite. Occasional gastric indigestion. Constant tympanites. Constipation.		Frequent palpitation of heart.			Is of the rheumatic diathesis.
CASE 22. Chronic Endometritis and chronic vaginitis.	Frontal, coronal and occipital cephalalgia. Constant lumbar rachialgia.	Bad taste in mouth mornings. Gastric dyspepsia. Tympanites and constipation—once went 24 days.			Urine leaves a white precipitate upon cooling.		Has had repeated ischio-rectal abcesses. Has now 3 or 4 fistulæ.
CASE 23. Endometritis.	Coronal cephalalgia. Occasional migraine. Pain encircling body through ovaries and sacrum.	Foul tasting mouth mornings. Gastric dyspepsia.					Passed menopausis 1 year ago.
CASE 24. Amenorrhœa.				Vertigo for 3 days, a great deal at menstrual epoch.			Is 16 years old. Has menstruated only 3 times, Dec., Jan. and Feb., last time being 3 months ago. Took cold and has not menstruated since.
CASE 25. Endocervicitis.	Temporal cephalalgia. Pain across epigastrium, Lumbar rachialgia.	Always bad taste in mouth mornings. Cheese always produces acute dyspepsia.		Suffocation spell always follows the extinguishing of light at night, without which she cannot sleep.			

No. of Case and Diagnosis.	Nervous.	Alimentary.	Respiratory.	Circulatory.	Renal.	Cutaneous.	Remarks.
CASE 26. Subinvolution and Uterine Catarrh.	Much of frontal, and an occasional coronal cephalalgia and lumbar rachialgia. Frequently has "fearfully nervous spells."	Foul taste in mouth mornings. Gastric indigestion. Tympanites since childhood. Always constipated.		Pulse intermittent. Has cold feet.	Lithic acid and mucous deposit in urine.		Has had 6 abortions within the past thirty months.
CASE 27. Amenorrhœa.		Appetite poor. Gastric dyspepsia. Costiveness.		Exaggerated cardiac action. No organic heart disease.			Aged 15 years. First 4 menstruations were regularly two months apart. Since then she is unwell every three months regularly.
CASE 28. Amenorrhœa.	Coronal cephalalgia.	Gastric indigestion.					
CASE 29. Mucous Polypus (small) and endocervicitis.	Frontal cephalalgia. Hot, boring, sacral rachialgia.	Bad breath. Bad taste in mouth mornings. Flatulent dyspepsia. Great tympanites before menstruation.					
CASE 30. Retroflexion and endometritis.	Occasional headaches. Lumbo-sacral rachialgia. Has "frequent nervous spells."				Profuse polyuria after nervous spells.		
CASE 31. Endometritis and "ulceration."	Neuralgic headache in temples and eyes frequently. Pain down left sciatic nerve during menstruation.	Bad taste in mouth mornings. Extreme constipation, sometimes 14 or 15 days.					
CASE 32. Endometritis.	Great pain in temples at menstrual epoch. Sacral rachialgia.	Bad taste in mouth mornings. Obstinate constipation.					

No. of Case and Diagnosis.	Nervous.	Alimentary.	Respiratory.	Circulatory.	Renal.	Cutaneous.	Remarks.
CASE 33. Endometritis.	Continuous cephalalgia, frontal or occipital. Sacral and lumbar rachialgia.	Yellow tongue. Carious teeth. Bad taste in the mouth mornings. Anorexia.					Locomotion produces excessive fatigue.
CASE 34. Endocervicitis.	Temporal cephalalgia before menstruation or upon becoming fatigued. Sacral rachialgia	Poor appetite Constipated habitually.					
CASE 35. Endometritis.	Coronal cephalalgia. Sacral and lumbar rachialgia.	Carious teeth. Yellow tongue. Bad taste in mouth mornings Gastric dyspepsia. Constipation.	Chronic bronchitis, with profuse expectorations.	Palpitation and dizziness upon exertion.	Lithic acid deposited in urine.		
CASE 36. Endocervicitis.	Coronal cephalalgia. Sacral rachialgia. Pain in both groins.	Anorexia. Gastric dyspepsia. Constipation.	Post-nasal catarrh.	Momentary dizziness coming on frequently.	Lithic acid deposit.		
CASE 37. Endometritis.	Coronal cephalalgia. Sacral rachialgia. Pain in groins upon exertion. Submammary pains.	Poor appetite. Constipation. Occasional hemorrhoids.	Out of breath easily upon exertion.	Palpitation upon exertion.	Uric acid deposited in urine.		
CASE 38. Subinvolution.	Frontal and coronal cephalalgia. Sacral rachialgia. Pains in hypogastrium, and up and down the thighs.	Anorexia. Gastric indigestion. Constipation.					
CASE 39. Subinvolution.	Frontal cephalalgia. Much pain in hypogastrium and over sacr'm.	Gastric and intestinal indigestion.			Has had attack of gravel for 2½ years. Passes bloody urine after the attacks.		
CASE 40. Endocervicitis.	Much pain all along the spine, excepting when pregnant.						Menstruates very irregularly. Used to h've terrible dysmen'rhœa prior to 1st pregnancy.

No. of Case and Diagnosis.	Nervous.	Alimentary.	Respiratory.	Circulatory.	Renal.	Cutaneous.	Remarks.
CASE 41. Endocervicitis.	Daily temporal and occipital cephalalgia. Rachialgia, thoracic, lumbar and sacral.	Appetite variable. Gastric dyspepsia. Constipation.			Urine deposits lithic acid.		
CASE 42. Rectocele.	Severe coronal cephalalgia. Pains in left side and groin, and left thigh to knee.	Anorexia. Gastric dyspepsia. Obstinate constipation.	Easily out of breath.	Palpitation upon exertion.	Lithic acid deposit in urine.		
CASE 43. Subinvolution.	Extreme coronal cephalalgia. Sacral rachialgia. Pains in hypogastrium.	Appetite very capricious. Gastric dysdepsia. Constipation.		Palpitation daily.	Uric acid deposit in urine.		Menstruated first at 20 years of age.
CASE 44. Cervicitis and endocervicitis.	Daily very severe coronal and temporal cephalalgia. Pain along the whole of the spine.	Appetite very ch'geable.	Easily put out of breath. Post-nasal catarrh.		Urine deposits lithic acid in great abundance.		
CASE 45. Hyperplasia with endometritis.	Great lumbar rachialgia.	Acid and flatul'nt dyspepsia. Vomiting very common and distressing. Almost starved on account of dyspepsia.		Palpitation.			
CASE 46. Subinvolution.	Burning coronal cephalalgia. Pain in lumbar and sacral regions.	Anorexia in morning. Nausea. Gastric dyspepsia. Costiveness.			Urination produces smarting and scalding sensations.		
CASE 47. Hypertrophy of cervix and endocervicitis.	Coronal and occipital cephalalgia. "Sick headache."	Anorexia. Constipation.	Easily put ont of breath.	Exertion causes palpitation.			
CASE 48. Subinvolution.	Pain in frontal and coronal regions a great deal. Much pain in hypogastric and inguinal regions.	Anorexia. Gastric dyspepsia. Defecation always produces great pain.		Vertigo frequently.			

No. of Case and Diagnosis.	Nervous.	Alimentary.	Respiratory.	Circulatory.	Renal.	Cutaneous.	Remarks.
CASE 49. Subinvolution. Retroversion and metrorrhagia.	Pains in both groins and lumbar region.	Intestinal dyspepsia.			Urinates too often.		
CASE 50. Subinvolution.	Hypogastric pains for two years past.	Great tympanites.					Very spammenorrhic. Is very easily used up by exertion.
CASE 51. Cervicitis and left lateroflexion.	Lumbar rachialgia.	Has gastric indigestion.		Palpitation very much.	Uric acid deposit in urine		Is continually languid and low spirited.
CASE 52. Subinvolution, menorrhagia and uterine catarrh.	Frontal cephalalgia. Lumbar rachialgia. Groin pain during menstruating.	Gastric dyspepsia. Tympanites.					

The first thing especially noticeable in the foregoing table is the uniformity of nervous and alimentary symptoms. The more important of the two are the alimentary derangements, because they invariably produce abnormal sensations, in some instances leading neurologists to make some astonishingly learned but frequently erroneous diagnoses. The stickler for exactitude of knowledge of the pathological relations in these cases, will at once begin to query as to whether the uterine disorder cause the alimentary disorder, or whether cause and effect are the reverse of this, and thus at once plunge into the midst of the old, old discussion from which, as yet, but very little of lasting good has been evolved. The writer wishes to call urgent attention to the necessity for special medical treatment of all cases of alimentary derangements, met with in gynæcological cases, irrespective of what produces them, accepting the fact of their existence as an indication for special treatment. This, of course, makes every gynæcologist a careful inspector of every factor and function of alimentation. He must, of necessity, examine the teeth, tongue, stomach, liver, spleen, intestines, rectum, ascertain if the food be well chewed, be properly cared for in the stomach, and supplied with the necessary digestive juices in the intestines, and if the *refuse material* is freely and regularly evacuated from the system. If 1,000 consecutive, miscellaneous dispensary patients could be examined with care and exactitude, and the universality of alimentary derangements pointed out, much surprise would be excited that there are not specialists devoted to the consideration of alimentary maladies. Defective digestion produces poor blood, and one of the accompaniments of an inferior quality of blood is a variety of abnormal nervous sensations or manifestations, varying according to the temperaments or idiosyncracies of the different patients. If this defective digestion and impoverished blood in gynæcological cases exist for months or years, cases whose long duration we see daily, we are sure to see evidences of some profound neurologic lesion capable of being christened by some ponderous name. Then these patients are said to have some nervous disease and are pronounced permanent invalids. One will be surprised frequently to see how quietly nervous symptoms will gradually disappear upon the correction of a dyspepsia, or

the removal of a costiveness or a constipation. Every physician will acknowledge that a patient constantly carrying around with her a load of excretion, indicated by the muddy sclerotic, foul tongue, bad taste in the mouth mornings, icteric, lifeless skin, sluggish bowels and loaded urine, can no more produce good blood and hope to be free from multifarious pains, than she can hope to pass through confinement painlessly. Yet the majority of gynæcological cases present this condition with an astonishing uniformity. The longer they have had uterine disease, the more deeply is this condition intensified. Every physician also knows that he seldom sees a case of uterine disease demanding treatment, where the patient presents a bright eye, a clear tongue, a faultless digestion, no pains, elastic step and a vivacious manner. Could every case be followed from the day that the patient first departed from the line of the exact physiological function of all of the organs of her system, it would readily be comprehended how and why it is that it is almost impossible to meet with a woman perfectly healthy. Over forty years ago Marshall Hall called the attention of the profession to the prime necessity for promoting excretion from the system, thus preventing auto-inoculation with excretion poison, a source of a large proportion of ailments which physicians treat.

We all know the peculiarly vicious, sickening odor of the breath of an habitually costive patient, whose absorbents are incessantly sucking up from the colon its fæcal load and carrying it into the circulatory torrent, whence it seeks other outlets, notably the lung and skin, producing bad breath and a lifeless looking skin. Such patients are pergrinating privies, endeavoring constantly to defecate through the lungs and skin. Such excessively bad blood as these patients make, will supply their nerve centers with just the right sort of pabulum to ensure abnormality of function, and we will be called upon to prescribe for various pains, for a functionally disordered circulatory system, and for the various diseased conditions of the generative organs. I am convinced that some of the painful conditions of the ovaries so commonly met with, are produced by the impoverished blood that such patients present. I recall especially one dysmenorrhœic patient from among the many that I have treated, who had

suffered almost infinitely from "inflammatory" disorder of the right ovary. She had been blistered, cupped, unguented variously over the ovary; had had local treatment, and had had the most approved and atrocious varieties of treatment during several years, from various physicians, and continued to successfully and satisfactorily grow worse. When called to her, I found her bedridden, a condition that she had then enjoyed for five months. The most excruciating tenderness of the ovary was elicited by pressure. Assuming the upright position, and especially walking, greatly increased her pains. Menstruation was an event which totally capped the climax of her sufferings, which were then so terrible as to necessitate intoxicating amounts of gin or anæsthesia from chloral or chloroform. When summoned to see the patient, I was informed that I was called to "prescribe for a probably forming pelvic abcess," another physician having so pronounced it. I found her as above described, with many other symptoms. She had a constant cephalalgia, a most rebellious constipation, excreted a very large amount of uric acid, and was anæmic to a moderate extent. The constipation and anæmia were soon done away with, but a large amount of uric acid was still noticeable. Recognizing the lithæmic vice, the patient was put upon colchicum and citrate of potassium. Slowly she improved, the ovarian tenderness disappeared, and the dysmenorrhœa became comfortable enough to endure by simply remaining in bed. I first saw and prescribed for this patient three years ago, and in six months she was able to go without intoxicants or analgesics during menstruation, to walk and ride and to spend the day out of bed. Since that date she has taken the various anti-lithic remedies *pro re nata*, and has maintained a satisfactory condition of health, having made journeys and resumed her former occupations. From first to last I used no local treatment whatever. The removal of excretive matter from the system and the improving digestion to the extent of allowing uric acid to be oxidized to the dignity of urca, and thus annihilating the lithemia, which seemed to completely saturate her system, gave her system a pure blood and removed her sufferings. In this case medical gynæcology seemed to wholly answer my purpose.

Thus far I have spoken only of remedies for alimentary dis-

orders. With regard to the respiratory and circulatory functional disorders, it may be added that, to a large extent, they are dependent upon imperfect alimentation. The same may be said of so-called renal disorders. The lithic acid diathesis is commonly associated in the medical mind with kidney derangement, whereas it is *wholly* dependent upon defective alimentation. Perfect digestion will always secure the proper proportions of urinary constituents. Colchicum and potash, vaunted so highly in lithiasis, the former for exciting the kidneys to "remove uric acid from the system," and the latter for "dissolving uric acid out of the blood," are now thought to exert their good effects *wholly* upon the ferments of the alimentary canal juices, and thus to promote perfect digestion.

When we reflect that so large a proportion of the gravest disorders of the human system, as anæmia, lithæmia, rheumatism, rickets, scorbutus, scrofula and tuberculosis can be more or less directly traced to the imperfect construction of good blood; when we recall that the latest conviction in the minds of epidemiologists concerning the liability of human beings to be stricken down by epidemics is, that they go soonest who are in the lowest grades of general health, although engaged in their usual avocations, and, that they who are in a perfectly sound physiological condition seldom or never fall before epidemics; when we consider that the so-called "predisposing cause" of disease resident in everybody can be, when eliminated from erroneous theories, brought down to the then existing condition of the blood, and made conspicuous and powerful in proportion to the deteriorated condition of this vital fluid, we can see the constant necessity that physicians are under to see to it that their patients should make the best of blood. Inspection of the latest works on practice all point to the one idea underlying all treatment, that good blood is a *sine qua non* to a return to health.

Two or three objections may be raised by physicians to the method of practicing gynæcology so evidently indicated herein. One objection is, that prescribing for the various derangements found in cases of female maladies is nothing more nor less than *general prescribing*. The admission is candidly made that this claim is a solid and commendable one. If the outlook of gynæ-

cology as a science is to be obscured by the danger of prescribing for all of the symptoms that its cases present, then is it so much the worse for this "science." It must *as* candidly be admitted that, in so far as gynæcologists can separate this so-called "science" from the general science of medicine and surgery, will they be able to obfuscate the minds of the ordinary medical practitioner with the error or heresy that gynæcological cases need *special* care and skill, and that they thus pass beyond the necessity for general prescribing. That physician is the safest gynæcologist who fails not to lose sight of the fact that the good health of women is but the other name for the perfect performance of function in her *nervous, alimentary, respiratory, circulatory, renal and cutaneous* systems; and at the same time that he judiciously makes local applications, he *as* judiciously prescribes appropriate remedies for whatever symptoms are presented for his consideration.

Of course the consideration of the treatment of these symptoms or conditions cannot be here taken up, for it would necessitate the writing of a small volume on practice. The only guide to follow is a carefully digested knowledge of physiology, pathology and therepeutics. These teach us the inseparableness and inter-dependence of the organic functions, the unification and harmonizing of which is the *only* thing that a physician ever strives to attain in any patient.

Another objection that can be offered is, that using local treatment and, at the same time, resorting to general prescribing, tend to ignore the differentiating between local and general diseases. This objection, repeatedly advanced, savors so offensively of prejudice and ignorance, in that it compels one to announce that he arrays himself upon the side of one or the other of the two factions in the ranks of gynæcologists spoken of early in this paper, that it reminds one of Sangrado's fixedness of theory of bleeding in the measles. The men raising this objection seem *determined* to have a theory to practice in accordance with. They seem, apparently, to consider themselves incapable of practicing unless they can tell precisely which first departed from the healthy standard, the generative organs or the general system. So long as they *will* have a theory, and *will* practice in accord-

ance therewith, and *will* fail to cure some easily curable cases because of their dogged determination to play Procrustes in medicine, why they must be allowed to frame theories, to stick to them and to make brilliant failures.

After all that has been said thus far, the question may arise what are the results of administering medicine along with local treatment to gynæcological patients? Dispensary practice is, perhaps, not the best field in which to observe results. Patients come once and physicians are never sure of their return. However those who have returned for continued treatment, present a percentage of improvement overshadowing that obtained before general medication was used, to such an extent that I have been astonished.

In addition to correcting alimentary disorders (a class of troubles present in at least nine out of ten patients treated), and other functional derangements wherever found, I have made very free use of ergot fluid extract. In all cases of recent uterine enlargement from whatever cause, or of endometritis, or in any case presenting profuse catarrhal discharge, ergot does good. One of the first remarked good results of it, is the diminution of the various pains about the pelvic region. I frequently give ergot alone for a week before examination or treatment, and it is common to hear of the above mentioned good results. (I hope to be able to present, at no distant day, some points upon the initial use of ergot in gynæcology that shall be of great service by way of aiding in diagnosis.) Enlargement from hyperplasia is but little affected *permanently* by ergot. Enlargement from recent labor or abortion, *especially if accompanied by* PROFUSE LEUCORRHŒA, is in nearly all cases relieved *without local treatment*, by free catharsis, quietude and ergot used largely. Nearly all cases of inflammatory uterine disorders having metrorrhagia as a common accompaniment, will be astonishingly benefited by ergot used continuously, till cured. I particularize thus concerning ergot because it is so largely useful in these maladies. It cannot be taken by all patients. Some women are so dreadfully nauseated by it that its use has to be abandoned. A few patients can bear ergotine who cannot bear ergot fluid extract. Still there are others who cannot take ergotine.

In urging the claims of Medical Gynæcology, the writer wishes to be distinctly understood as desiring to advocate a recurrence to the good old-fashioned way of regarding *all* diseases as manifestations of the disturbance of relations between *waste* and *repair*, an equality of which means HEALTH. This idea is older than any physician living to-day. In the modernized craze for refinements in etiology, pathology, diagnosis, and for mutiplicity of specialties, this simple and trite fact is too often overlooked. If enquiry of each system of the human organism reveal any departure from health, let the physician busy himself with correcting it. He should never lose sight of the utter, the fantastic absurdity of supposing that there can be an overshadowing necessity for avoiding medication for the almost invariably accompanying functional disorders presented in uterine maladies, as is only too commonly done by physicians to-day.

603 MICHIGAN AVENUE.

THE EPIDEMIC OF SMALL-POX IN CHICAGO DURING 1877.

BY J. SUYDAM KNOX, M. D., Asst. Commissioner of Health, Chicago, 1877.

(Remarks before the Chicago Medical Society.)

At the present day, the opportunity to study an epidemic of small-pox, is seldom offered to the general practitioner. I would therefore submit the following propositions, as at least demonstrated in this city in the epidemic of the past year.

I. Small-pox cannot become a serious epidemic in any city where vaccination and isolation are compulsory, and thoroughly accomplished.

During the year 1877, in Chicago, small-pox appeared successively in five widely separated localities, viz., No. 215 West Division st., No. 555 Milwaukee ave., No. 22 Hinsch st., No. 784 Archer ave., No. 503 Blue Island ave. At each place the disease had become fully developed, several cases had occurred, and free intercommunication had been allowed. Each locality

was the center of a dense population; the people were poor and over-crowded; their sanitary conditions were inferior; many of the children were unvaccinated, and few of the adults had been vaccinated since infancy. In addition, certain occult influences (telluric or ethereal), strongly disposed to the inception of the disease. With so many favoring circumstances, an extensive and rapid spread of small-pox was to be expected, yet but 154 cases in all occurred. A surprising result in a city of 500,000 inhabitants.

I attribute this prompt suppression of the disease to the following:

Every case that could bear removal, was promptly taken to the small-pox hospital; every house that was infected, together with all its contents, was thoroughly saturated for eight hours with sulphurous acid fumes: every family within four blocks of a case of small pox, was vaccinated through house to house visitation; in addition, every legitimate means was used to vaccinate all unprotected people throughout the city.

Lest this be considered exceptional, compare results occurring during the same year in the neighboring cities of Milwaukee and Montreal. In neither city was vaccination compulsory, nor was the removal of the sick to a small-pox hospital observed.

In Milwaukee, two per cent. of the population contracted the disease, which percentage in Chicago would represent 10,000 cases.

In Montreal, over 600 deaths from small pox occurred, which number, according to population, would represent 3,000 deaths in Chicago.

II. Removal to hospital is to the advantage of the patient.

The law requiring removal to a small-pox hospital, was impartially carried out in all cases, the only patients left at home, were those found in the suppurative stage of the disease.

Out of 154 cases,

116 were removed to hospital.

26 or 22.4 per cent. died.

38 were quarantined at home.

17 or 45 per cent. died.

It will be thus seen, that the chances of recovery of the patients were increased 100 per cent. by removal.

It would be absurd to assume that the simple journey to the building worked this result. It would be equally absurd to claim that it diminished it. My observation only corroborated what expert testimony long ago decided, viz., "that the removal of small-pox patients before the eighth day of the disease, works no injury to the patient.

I attribute the diminished mortality solely to the better ventilation, better sanitary surroundings, better diet, more experienced nursing, and less officious medication afforded by the hospital.

III. Adults, vaccinated only in infancy, contract modified small-pox (varioloid) almost as readily as non-vaccinated children contract small-pox.

In other words, they are almost as liable to the disease as if never vaccinated.

Out of 154 cases, there were: Adults, vaccinated only in infancy, 76, deaths 4; children, never vaccinated, 78, deaths, 39; average age of adults, 24 years; average age of children, 4½ years.

Infant vaccination, without re-vaccination, exerts but little influence in staying the spread of small-pox, though it wonderfully diminishes the mortality from the disease.

Herein lies the cause of epidemics of this disease. The initial small-pox patient in almost every epidemic is some adult journeying from some infected locality. The custom of vaccinating infants has become almost universal, but it is only the better classes who avail themselves of the greater protection of re-vaccination. No nation has yet framed a law by which vaccination is thoroughly and successfully accomplished.

It is an interesting question how long a primary vaccination retains its efficacy. During the past epidemic my observation was that nearly every adult re-vaccinated for the first time took the vaccine disease.

The three following cases upset the popular belief in a seven years' duration of vaccinal protection:

A. K., aged 3½ years, was successfully vaccinated by myself,

although she bore the mark of a vaccination successful three years before.

E. K., mother of the above child, was successfully vaccinated by me, although she had been as successfully vaccinated three separate times in the past ten years.

Mary McG. was successfully vaccinated when three years of age. During the summer of 1877, when eight years of age, she was inspected in the public schools and passed as sufficiently protected, having a well-defined and typical vaccinal cicatrix; two weeks later she was taken down with confluent small-pox, and barely escaped with her life.

IV. *Recent successful vaccination is an absolute protection against small-pox in any form.*

Accompanying the 116 cases of small-pox sent to the hospital, were 98 relatives. These made an average stay in the building of three weeks. They were all successfully vaccinated before admission, and not a single one contracted small-pox. The families of the 38 patients left at home, were also all vaccinated, and were rigidly quarantined with the sick, yet not a case of small-pox occurred among them. The same may be said of the 20 employes of the health department who were constantly exposed to the disease.

In no instance under my observation did small-pox develop itself where primary vaccination had been successful within three years, or where successful re-vaccination had been once achieved.

V. *Successful vaccination modifies small-pox, if done during the course of the latter disease.*

This proposition is so interesting, and so generally questioned that I regret my inability to report more cases.

The following are submitted:

(1). May 12, on 19th street near Western avenue, I discovered a woman sick with small-pox, in the eighth day of the disease. In bed with her was her unvaccinated babe, aged three months. The child was immediately vaccinnated—Three days afterwards it came down with small-pox. The vaccination was retarded but successful and distinctly modified the duration of the small-pox, and the character of the eruption. The child promptly recovered.

(2). July 10th, Dr. J. M. Hall, Medical inspector, vaccinated Annie Esan, aet. six mos, at 477 N. Paulina street. At the time other members of the family in the house had small-pox.

Two days later, July 12th, small-pox showed itself in Annie. The vaccination also was successful, and the two diseases synchronously occurred in the same body. In his report of the case Dr. Hall says: "I am satisfied that the vaccination saved the child's life."

(3.) E. Wagner, aet. 18 months, living on 20th street, near Hoyne, was successfully vaccinated by Dr. E. Garrott, Medical Inspector. On the afternoon of the same day she was taken down with small-pox. The Doctor assured me that the vaccination modified the small-pox as to time and character, and that the child recovered thereby.

(4.) Mrs. Niemath, residing at 17 Broad street, was found sick with small-pox and sent to the hospital. Her son, aet. 2 years, was vaccinated, and left at home with the father. The vaccination was unsuccessful. A week afterwards, on visiting the house, the child was found just coming down with small-pox, and was again vaccinated. This second vaccination was successful, but not typical. The small-pox, however, was modified, and the child soon recovered.

(5.) S——, a babe, aet. 3 months, residing at 768 Congress street, was vaccinated by me after six days exposure to pronounced small-pox in the father. In three days the vaccine vesicles were large and well developed, when small pox appeared in the child. The whole course of the disease was that of (so-called) varioloid, there being no secondary fever to speak of, and the eruption rapidly drying up after the seventh day. The mother, who had not been vaccinated since infancy, was successfully vaccinated at the same time. The father, also vaccinated in infancy, died in hospital of hæmorrhagic small-pox.

In consulting the tables of mortality, I find that out of 24 infants under two years of age, who had never been vaccinated and contracted small-pox, 16, or 66⅔ per cent., died. If the percentage of deaths is so large, it must be more than a coincidence that the only five cases successfully vaccinated during the disease should all recover.

In reviewing my experience of the past year, I am convinced that removal to hospital should always be required, as serving the best interests both of the patients and the community; re-vaccination, as well as vaccination, should be compulsory; and vaccination should be practiced, not only as a prophylactic, but as a method of treatment of small-pox.

UNUSUAL DISTENSION OF THE CAVITY OF THE CERVIX UTERI, WITH SPASMODIC CONTRACTION OF THE INTERNAL OS, IN A CASE OF MISCARRIAGE.

By Norman Bridge, M. D.

(*Read, in abstract, before the West Chicago Medical Society, Sept.* 23, 1878.)

Mrs. X., æt. 36 years, a healthy American woman, who had borne three children at term—the youngest being 4 years old and the oldest 18—was threatened with miscarriage at the end of the fourth month. She had had some irregular pain in the back and had been losing considerable blood for three days; so that she was very pale and so weak she was obliged to keep in bed. The uterus was found to be of the globular shape and size characteristic of the period of gestation existing; the cervix was of normal shape, projecting from the mass of the uterus half or three-quarters of an inch, and the os was closed. No blood was being lost at the time of the examination—at least none of any consequence—and no interrupted pains were occurring. The recumbent posture, small doses of morphine and ipecac, as required by pain, and an occasional ten-grain dose of gallic acid, were ordered.

For two days the indications were that an abortion would be averted. There was no pain or loss of blood and the shape and prominence of the cervix did not change. Then gradually the cervical projection disappeared and the os became patulous, and there was some loss of blood. At the end of five and a half days from the first visit an examination revealed no projection of the cervix beyond the uterine globe; the os was dilated to the

size of a silver half-dollar. The patient had been discharging blood in considerable quantity for twelve hours. Two teaspoonfuls of Squibb's fl. ex. ergot had been taken in divided doses since the flowing began. Not more than six pains at all like labor pains had been experienced during this time. The flowing had ceased. An attempt was now made to further dilate the os with the fingers and assist the uterus to expel its contents. Patient attempts at dilatation availed little—the border of the os becoming hard like a cord on every effort to stretch it, however gently the pressure was applied. The opening was already sufficient for the exit of clots of considerable size, and these bodies were hooked and drawn out of the cavity by the finger, until the bulk of them became surprising if not alarming.

After extracting all the clots that could be reached, and what I think it no exaggeration to say would amount to a pint and a half in quantity, effort was made to reach some part of the fœtus. But instead of grasping the fœtus, the finger, as it was pushed up, only struck the hard border of another opening to a cavity beyond. This opening was recognized as the internal os uteri and the cavity as that of the body of the uterus.

All these clots, then, had been contained in the cavity of an elongated cervix uteri. I am positive that during the extraction of the clots none of them came down from the uterus, as there was no movement of the jelly-like body of blood from above, and furthermore most of the masses were too large to pass unbroken through the internal opening.

The distance from the external to the internal os was about four inches—judging from measurements made with the finger.

The internal os was dilated less than the external; it was exceedingly hard and unyielding and presented a sharp, hard border. The walls of the body of the cervix were quite soft and distensible, and it was not surprising that they had been able to enclose such a mass of blood clots.

It was the work of nearly or quite half an hour to dilate the internal os with the fingers, and grasp and extract the fœtus and placenta. The feet of the fœtus were first secured, and brought down with little difficulty, and the body drawn through the opening, when the internal os immediately contracted about the neck,

and refused to allow the head to pass. The long delay was caused by the difficulty encountered in delivering the head, and no one who has not had a similar experience can appreciate how great the obstacle was to the execution of this maneuver, generally so simple and easy. The head was of course small and elastic—easily moulded to almost any shape; but the internal os closed to a diameter much less than that of this body, and presented a border or ring that was so sharp and firm as to give an impression to the fingers as though a string of catgut, imbedded beneath the mucous membrane, so as to encircle the cavity at this point, had been drawn together to this small diameter, and tightly tied.

Little difficulty was found in extracting the placenta. The uterus being emptied, contracted firmly. In this contraction the cervix was involved to a very slight degree only, for to the touch it still seemed like a soft, fleshy bag of considerable size, empty and collapsed. The body of the uterus, in distinct contrast, was quite hard.

This case, it appears to me, is a peculiar and interesting one, in the fact that the cervix uteri had undergone an unusual elongation, and a distension of its walls that transformed it into a cavity as large, or nearly as large, as the cavity of the uterine body; that this cavity was guarded by a positive contraction of the external, and a very much more pronounced and extensive one of the internal os; that the latter, by contracting upon the neck of the fœtus, interposed a serious obstacle to the extraction of the head after the body had been successfully delivered; and that all this should have occurred in a patient not advanced to the fifth month of pregnancy.

It is now tolerably well demonstrated that the cervix uteri may become, during parturition, elongated and distended until it is capable of accommodating a considerable portion of the mass of the child; and in cases where this occurs—whether as a cause, or consequence, or neither—that the internal os may be contracted with such force as to make natural delivery impossible.

The case here reported shows the possibility of a similar combination of unusual phenomena in miscarriage before half the normal period of gestation has been reached. I am not aware

that any case similar to this has heretofore been recorded, although one resembling it in the spasm of the internal os, as well as in the stage of gestation at which it occurred, is quoted at length near the close of this paper. Another case, reported by Dr. Goelet, and presently to be described, bears possibly a still stronger resemblance to the one just detailed.

Dr. Hosmer,* of Massachusetts, has reported—from his own practice and that of others—four instances of women who have, during parturition at term, had the misfortune to have distocia from spasmodic contraction of the internal os. One woman had two labors thus complicated; another three; the rest, one each.

The mothers all died as a consequence of the distocia and the ordeal; two died undelivered.

In each labor the same difficulty presented itself. All the presentations were of the head, and the obstacle to delivery was a sharp contraction of what was evidently the internal os, grasping the child somewhere between the head and hips after the former had passed out of the cavity of the uterus and was contained in the enormously elongated cervix. In all the cases where delivery was accomplished, version had to be resorted to, and this operation was, in some of the cases, an exceedingly difficult one, owing to the force of the contraction of the internal os. In nearly or quite all the cases the forceps were first tried, but in no single instance was it possible to deliver the fœtus head first.

The constriction referred to was, by the attendant in each case, supposed to be in the uterine cavity proper, and it is no wonder it was taken for an hour-glass contraction according to the old descriptions, occurring ante partum. In one case it is described as "midway between the os and fundus;" "a powerful constriction, grasping and holding the pelvis of the child like a gigantic sphincter, whose force, perhaps, was surely to be augmented through the law of reflex action by every attempt that was made to overcome and remove it."

In another case, the observer, in describing the efforts at version, says: "Before the leg could be found the hand reached what, from the rounded outline, was supposed to be the fundus of the

* "A peculiar condition of the cervix uteri which is found in certain cases of distocia."—*Boston Med. and Surg. Journal, March* 21, 1878.

womb. Under the impression that the position of the fœtus might have been mistaken, the hand was partially withdrawn. This question having been settled, the hand was again pushed upwards, and then discovered that what had been at first supposed to be the fundus was really a constriction about the upper third of the uterus, encircling the child and inclosing its hips and lower extremities." "It seemed like an hour-glass contraction, and consisted of a large, firm band, with its inner edge quite sharp." "The upper surface of the constriction seemed flat, and to the touch suggested the edge of a board or shelf." So strong was the constriction that the "hand, now within and beyond it, could not be opened, and the arm was paralyzed and almost useless."

Dr. D. S. Kellogg,* of New York, has recently reported a case of what he evidently supposed at the time of its occurrence, to be an hour-glass contraction of the uterus, but which, from the description, it can hardly be doubted, was a case identical in character with those reported by Dr. Hosmer. Dr. K. says in his paper: "There was a nearly circular band about one-third of the distance from the internal os uteri to the fundus, which band was higher up behind than in front, and which closed down upon the child like a strong belt of leather."

The constriction was so unyielding and so powerful, that in attempting to dilate it with the patient anæsthetized, "each one [three physicians being in attendance] in turn, until exhausted, gently, but firmly, tried to insinuate his hand into the stricture. After an hour or two we were rewarded by one foot, then presently by the other." After version, and the delivery of the fœtus through the constriction, no obstacle was met to its complete delivery into the world, until the head reached the "internal os uteri," when a slight contraction occurred at this point, but did not last long. Such difficulty was met with in extracting the head from the pelvis, however, that the fœtus had to be decapitated, and the head emptied and crushed. A measurement subsequently showed the antero-posterior diameter of the superior strait, to be less than $3\frac{1}{2}$ inches.

* "An interesting and unusual case of obstetrics." By D. S. Kellogg, M. D., etc., *Medical Record*, Aug. 31, 1878.

Were it not for the fact that Dr. K. speaks in two places of the unnatural constriction as being above the *internal* os uteri, no one would regard this case as differing from those reported by Dr. Hosmer. If Dr. K. is certain he demonstrated the existence of both ora—the internal as distinct from the external os, then his case forms a variety different from the others referred to, and this whole subject acquires thereby, a greatly increased interest.

In the absence, however, of a more positive statement on the point alluded to, readers will be inclined to class all these cases as alike in anatomical characteristics.

In 1870 Dr. Gray* reported to the Buffalo Medical Association a case of what he believed to be hour-glass contraction, occuring before the birth of either child or placenta. After referring to the fact that certain authors had denied that hour-glass contraction occurring after the delivery of the child, was produced by anything but the contraction of the internal os—it being claimed that there is no such thing as hour-glass contraction of the body of the uterus—and after expressing his belief in this occurrance according to the old descriptions in the books, he proceeded to give a history of his case.

His patient "had had five or six difficult labors, giving birth to still-born children." She had been in labor 48 hours when the doctor was called to her in consultation. The presentation was of the vertex; forceps had been used and these failing, craniotomy had been performed before his arrival. Dr. Gray then again tried the forceps, failed and introduced his left hand to turn the child. He seized a foot, but found he could neither bring that down nor withdraw his hand "on account of the constriction of the circular fibers of the muscles of the uterus." "Any effort to remove the hand from the uterine cavity would excite such strong muscular contractions that it became impossible while the hand was closed." "The constricted portion of the uterus appeared to be the size of a rope one inch in diameter, felt as hard as a bone, and at first was mistaken for bone." "Its contractile power was so forcible that the pain inflicted upon the wrist at each uterine

* *Buffalo Medical and Surgical Journal*, January, 1871. Half yearly Compend. July, 1871.

contraction, was almost insupportable." The head of the child "was below the rope-like and constricted muscles." He was positive that the uterine contraction "was not that of the os uteri, but existed above it." After the leg was brought down the turning could not be completed "by the strongest traction." But by pressing strongly against the head, forcing it back through the hour-glass contraction and making strong traction by the leg, delivery was finally accomplished. The woman had a mal-formed pelvis, the promontory of the sacrum was unusually prominent and the conjugate diameter was not more than three inches. The operation was made with the aid of anæsthesia. The woman recovered.

Evidently the possibility of an elongation of the cervix that would make it spacious enough to hold the head of the child, had not occurred to the reporter of this case. Without such a possibility in mind any practitioner would probably have arrived at the conclusion Dr. Gray did as to the nature of such a complication. Yet no one reading Dr. Hosmer's paper and this report could doubt—it seems to me—that the same pathological condition existed in all the cases recorded by both. This view is strengthend by the fact that in Dr. Gray's case there was a resemblance to most of the cases of Dr. H., and that of Dr. K., in a deformed pelvis, that had proved an obstruction to delivery, and had presumably caused the death of the child, in five or six previous parturitions.

Dr. A. H. Goelet* has recently reported a case that could be labeled as one of "hour-glass contraction of the uterus before the expulsion of the fœtus." The woman was advanced to 6½ months of her third pregnancy. Labor came on, the os was fully dilated, the membranes were intact, no presenting part could be felt. The pains being feeble, ergot was given. After the rupture of the membranes and the discharge of a large quantity of amniotic fluid, "the uterus was discovered to be contracted in the center, the fœtus above the constriction, and a finger projecting through." Hemorrhage continued, and the indication to evacuate the uterus was urgent. "With great difficulty one finger was forced through the constriction, then another, and

* *North Carolina M. Jour.*, Mar., '78—Monthly Abstract.

after considerable search a foot was found, but having only two fingers with which to grasp it, very little traction could be used. Finally one foot (for the other could not be found) was dragged down and out of the vulva, but when the breech of the child presented against the constriction, it required all the force that could be exerted with both hands to bring it through, and the same was the case as the shoulders and head came down in succession."

I have been unable to consult the original report of this case, and regret the abstract is not more full and explicit in certain details. But judged strictly by the description given, the case is so similar to that of Dr. Gray that, from a pathological standpoint, but one very essential difference is to be noted; that, namely, in the period of gestation at which labor came on in the two cases. The inference is natural that the obstruction was anatomically alike in these cases.

Bearing upon this subject are the observations of Dr. Bandl.* He has recently studied 32 cases of rupture of the uterus, a majority of which occurred in the Vienna lying-in hospital, the rest (13) being from records of his own observation. In no case was this accident due to morbid change in the substance of the uterus. The ruptures nearly all occurred in or very near the cervix. In nineteen of the cases there was narrowing of the pelvis; in twelve there was either abnormal presentation or monstrosity of the child. Dr. B. believes the accident is due to excessive thinning and elongation of the cervix during labor, whereby it is predisposed to rupture, and that this thinning and elongation are due, to a large extent, to the "disproportion which does not allow the presenting part to descend into the pelvis." When this obstacle exists, the internal orifice of the cervix, contrary to the usual and normal course, "is raised a handbreadth above the brim" by the contracting effects of the womb, and perhaps by fixation of the external os against the brim of the pelvis, and so thinning of the walls and rupture of the cervix become possible. In some of the cases examined, the cervix was found eight inches in length.

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*Centralblatt, No. 33, 1875. Amer. Jour. Med. Sci., Jan., 1876. Boston Med. & Sur. Jour., Jan. 3d, 1878.

It is a fact in favor of his hypothesis that of the six women whose histories are written by Drs. Hosmer, Kellogg and Gray, four had such a pelvic deformity as Bandl describes. Of the other two there is no record of any careful measurements—or measurements at all—to determine the question, although it is said simply that the pelves were normal. In one of these latter, it is certain, from the description, that a rupture of the uterus that occurred must have taken place through the cervical wall, warranting the suspicion that this was elongated and attenuated.

The preponderance among these cases of those with this deformity of the pelvis, not only tends to establish the identity and character of all of them, but further to confirm the hypothesis that the distocia in such cases is somehow connected with this particular kind and degree of deformity.

Whether the elongation of the cervix is the first step, and induces or favors the violent contraction of the internal os uteri, is an interesting question yet to be answered.

Very few writers on obstetrics make any reference to the fact that an hour-glass contraction may exist, the contracted portion consisting of the internal os and the two cavities respectively of the uterine body and cervix, and I am not aware of the existence of any treatise on the subject in which the possibility of an hour-glass contraction occurring before the birth of the fœtus is even remotely suggested.

Playfair * very distinctly departs from the old descriptions. He says the hour-glass contraction "seems to depend on spasmodic contraction of the internal os uteri, by means of which the placenta becomes encysted in the upper portion of the uterus which is relaxed."

Meadows † writes as though he expected somebody would challenge his assertions on this topic, for he says there was in all the cases he had seen (four) "a considerable space above the external os and the seat of the stricture, above which was encysted the placenta." He is satisfied "the space in question involved more than the cervical portion of the uterus—that, in fact, a good part of the body of the uterus was below the seat of stricture."

* Playfair's work on Midwifery, p. 376.
† Manual of Midwifery, p. 378.

Roberts, * in his recent work, says: "When the contraction exists at the internal os, hour-glass contraction results, the uterus being divided into two compartments, with the placenta in the upper division." Then, as though unwilling to leave the impression that such is the only mode of production of this phenomenon, he says: "True hour-glass contraction is, however, of rare occurrence."

Meigs † says: "Hour-glass contraction depends either upon the contraction of the womb at the upper limit of the cervical portion, so that the after-birth is contained, as it were, in a separate cell, or the contraction may take place so as merely to include the placenta, still retaining its original connection with the uterus."

Bedford ‡ says, under the head of hour-glass contraction, that the constriction usually occurs "at the upper extremity of the cervix or in the body" of the uterus.

That the cervix may easily become elongated in parturition, there ought to be no doubt; perhaps such elongation as is described in the cases just quoted, ought hardly to occasion surprise. It must have occurred to every practitioner of experience to observe cases where, without any serious obstruction to normal delivery, the cervix was so much elongated as to become fixed between the child's head and the pubic arch.

A number of cases are on record in which the external os has been extruded beyond the vulva. Mr. Lever § has reported a case in which the elongated anterior lip of the os in a patient with a small pelvis was forced out of the vulva like a large polypus, and was not fully retracted until two days after the labor—the mass being treated with punctures to favor the evacuation of the fluid of the swelling, and with fomentations; the use of the catheter being required in the meantime for the evacuation of the bladder.

Dr. Chas. W. Earle, at the West Chicago Medical Society, October 14, related a case that occurred several years ago in his

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* Guide to the Practice of Midwifery, p. 180.

† Edition of 1856, p. 446.

‡ Principles and Practice of Obstetrics, 1863.

§ Guy's Hospital Reports. First Series, volume vii.

practice, and that bears strongly on this point. The patient was a woman in her tenth labor.

There was retention of the placenta, and considerable hemorrhage, after the expulsion of the child. The hand was introduced to detach the after-birth, and on withdrawing it, the wrist was grasped by vigorous contraction of what was undoubtedly the internal os. This contraction was so strong that it offered no inconsiderable obstacle to the withdrawal of the hand.' After the delivery of the child, there was discovered a mass of fleshy substance, hard and firm, projecting from the vulva, which proved to be a loop as large in diameter as the finger, and through which two or more fingers could be passed. The mass had not entirely disappeared twenty-four hours after the labor. It was subsequently retracted within the body, and the patient made a good recovery.

From Dr. Earle's description, this fleshy mass could have been nothing but the anterior lip of the external os of a cervix uteri remarkably elongated. Admitting this condition of things to have existed, it is not strange that the pinching of the attenuated cervix between the child's head and the os pubis, with the forcing of powerful propulsive uterine contractions, should have caused a rent that would make exactly the loop that was observed. Indeed, it appears to me a little remarkable that such ruptures near the free border of the cervix, when elongated so excessively, do not occur frequently. It is a fact of significance that with the elongation of the cervix in this case, there was also the vigorous contraction of the internal os. This is in favor of the notion that the internal os is disposed to contract with preternatural force from elongation of the cervix, as well as from excessive irritation of the part, which we know to have occurred in this instance.

Dr Earle's patient has since borne a child in a labor unattended with the discovery of anything peculiar about the neck of the womb.

At the same meeting, Dr. W. T. Belfield gave an account of a case that occurred at Cook County Hospital during his residence there, in which, after the delivery of the child, the border of the external os uteri projected from the vulva, and was mistaken by

some of the internes for the border of the placenta which was retained. Efforts were made, by traction on the cord, to dislodge the placenta, but to no purpose. A further examination revealed the internal os some six inches above the vulva in a condition of firm contraction, grasping the cord, the placenta being imprisoned beyond and above it. The dilatation of the internal os, and the extraction of the placenta, was a tedious operation, but was accomplished without injury to the patient, who made a good recovery.

Dr. A. R. Barton* has reported a case of excessive elongation of the cervix uteri, which was an obstacle to delivery. The cervix had been elongated for several weeks prior to the confinement, to such a degree that it projected beyond the vulva and the os externum had become like cutaneous surface in its appear ance. When labor began, it protruded from the vulva four inches, and was eight inches in circumference. "The finger carried into the cavity of the tumor discovered nothing more than a continuous canal. Even when the tumor was carried up on the finger as high as possible, the child could not be reached. The fundus of the uterus was well up into the epigastric region."

The external os was so dense that dilatation was impossible, and ten incisions were made in its border before the child could be extracted. After the labor was over, the tumor was returned to the vagina, and remained. The woman recovered, but had prolapsus of the uterus after she had been about the house a few weeks. Two years later she became pregnant, carried the child to the full period, and was delivered in a normal labor.

Whether it shall be fully proven that the internal os uteri is the chief factor in the production of most of the cases of the hour-glass contraction of authors, as well as of all such remarkable and anomalous cases of ante-partum obstructive contraction as the records quoted in this paper illustrate, remains to be seen. But that the internal os is involved in many more pathological states and phenomena than is generally supposed, seems evident. Indeed, the pathological possibilities of this part of the uterus appear to be only now receiving full attention. One of these,

* *The Medical Record*, Feby. 16, 1878, p. 129.

and one which we seem often to forget about, is an excessive irritability and hyperæsthesia—or rather hyperalgesia. Now that it is the general habit to treat cases of uterine disease locally, it is one of the most common observations to find the internal os the most sensitive part of the organ; indeed often it is found the only part sensitive. The external os may be hooked with a tenaculum, slashed and harpooned with cutting instruments and the patient not be conscious of it, when the gentlest passing of the smallest sound through the internal orifice will cause her to start with pain.

It is to be expected that a state of excessive irritability of the internal os will be attended with contraction, spasmodic or otherwise, of its muscular fibers, or pain, or both, whenever it is subjected to irritation. That such is the case in both the impregnated and unimpregnated uterus, we have abundant evidence. With a high degree of irritability, an irritation otherwise trivial will lead to them, albeit perhaps with only moderate intensity. Excessive irritation may induce them when only a normal degree of irritability exists in the part. What ought we to expect—what not to expect, when with an internal os in the highest degree irritable and sensitive, a labor is attended with an injury to the mouth of the uterus that borders on mutilation?

Hour-glass contraction occurs most frequently in cases, where during the labor, the orifice of the womb has been much irritated by instrumental manipulations. Such is the opinion of some writers on obstetrics.*

In contracted pelves the cervix is necessarily liable to unusual irritation and injury. This being true, spasmodic contraction of the internal os in such cases as are reported by Dr. Hosmer, ought not, perhaps, to be regarded matter for wonder. It is the degree and force of the constriction that is the fact unaccountable. Not even the supposition of a ring of cartilage explains this fully.

How it happens that at the time of labor a degree of irritability may exist that makes spasmodic and irregular contraction possible, seems difficult of explanation. But ought it to be?

* See Byford's work on Obstetrics.

We know that women with uterine disease often become pregnant. So common an occurrence is it for ulceration and chronic inflammation of the cervix to exist during pregnancy that grave discussions have occurred among the profession as to the propriety of continuing local treatment of them during this period. The sensitiveness of the internal os just referred to as so common in gynæcological cases, and which is doubtless largely due to inflammation, is not a bar to conception. And it seems nothing more remarkable that this irritability should continue during gestation than that an ulcer should. If it persists in any case, it is of course present when labor occurs, whether this be at the full term or before; and being present at such time, it is in waiting to cause, on the slightest provocation, the most serious mischief. But the provocation is often severe in the shape of irritations and injury to the mouth of the womb; and it is quite possible that the physiological changes of gestation may, in certain patients and under certain circumstances, increase an irritability of the internal os that before conception was pathological, so that when labor occurs it is ten fold more formidable and troublesome than it would otherwise have been.

As the exalted irritability often exists, if it is capable of inducing the obstruction once, why may it not do so frequently, especially as irritation of the cervix in labor is any time liable to occur?

Taking all the considerations named into account, I question whether the explanation here suggested is not alone sufficient to account for all the cases of obstructive contraction of the internal os uteri in labor that ever occurred.

The following history of a case,* reported as one of "stricture of the internal os as a cause of miscarriage," by Dr. Wm. Marshall, is quoted here because it exemplifies the most extreme hyperæsthesia and propensity to spasm. The patient was a delicate woman of thirty, and five months advanced in pregnancy. Her last previous pregnancy had resulted in miscarriage at the fifth month, with pains more severe than was usual in her con-

* *Glasgow Medical Journal*, Feb. 1869—*Am. Journal.*

finements at term. The os was dilated "to the size of half a crown, and very soft."

"On passing my finger up in order to feel the fœtus, I found the canal of the cervix becoming decidedly narrower, when suddenly she cried out that I was cutting her, and jerked herself away. On a second attempt, the same thing was repeated; but on a third, being prepared for her moving, I ascertained that a tight resisting constriction existed at the internal os, which would not admit the tip of the finger. As soon as I touched the constricted part, she complained of a severe cutting pain; and on attempting to pass the finger through it, she became hysterical, and on my persisting, *perfectly maniacal*. On withdrawing my finger, she immediately became rational, and complained of the agonizing pain I had caused her.

"As she was quite positive that in her previous miscarriage she had suffered for three hours as much as she was doing now, I waited for a couple of hours. During this time the pains were very strong, and the suffering greater than I had ever seen in any confinement. In order to make a thorough examination, I put her under chloroform. The external os was very soft and dilated; but at the internal os there existed a constriction, which still readily allowed the finger to pass through, and which seemed now quite dilatable. The breech was presenting, and I had no doubt that when a pain came it would be pushed through, and the whole thing soon be at an end. The pains, however, did not return as long as I left her under chloroform, so that I was forced to discontinue it. The stricture returned with the first pain, firmly grasping the tip of my finger, which I had retained in the uterus. I now gave her a dose of ergot, and waited until one o'clock, when, finding that little or no progress had been made, I determined to notch the stricture in one or two places under chloroform, as it was impossible to touch it without causing intense pain, and bringing on a maniacal paroxysm. I went home for a probe pointed bistoury, and on my return in half an hour, found the strictured part with the breech forced into it, protruding through the internal os, which was drawn up around it. After a few pains, the breech passed through the constriction. I pulled down the body, and finding that the head would not come, pushed my finger past it, hooked it over the crown and pulled the head through the stricture. Without withdrawing my finger, I detached the placenta, and withdrew it and the finger at the same time. While doing all this, the patient was perfectly maniacal—she shrieked, kicked, struck, and bit at those around her."

"She recovered without a bad symptom."

This case is a most interesting one in several particulars. In some points it will be seen to resemble the case, the report of which introduces this paper. It was attended with a much greater degree of sensitiveness and irritability of the internal os uteri, more pain and probably more vigorous spasmodic contraction, but there was no such elongation of the cervix, and distension of its body

into a large cavity—a cavity capable of accommodating a fœtus, as existed in that case.

That it was the internal os alone that was the offending part and the cause of the obstruction in this case is evidenced by Dr. M's. description of his exploration of the external os, the cervix—which grew narrower toward its upper extremity, and the strictured point itself. If confirmation were needed, it is furnished by the phenomena of the expulsion of the presenting part of the fœtus from the womb. "The strictured part, with the breech forced into it," protruded "through the external os, which was drawn up around it," the cervix being literally turned inside out. This case is, fortunately, reported with such explicitness and detail that it alone establishes the pathological conditions described.

In the case reported by myself there was a total absence of hyperæsthesia of any part of the womb. The vigorous contraction of the internal os was probably in part due to an increase of its normal physiological irritability—its capacity to contract in response to stimuli. But the main cause, it seems to me, was the irritation produced by the stretching of the cervix, aided possibly by a pathological condition of the external os—traumatic or otherwise—evidence of which in a distinct roughness of its surface, was discovered at the first examination.

The distension of the cervix was probably a purely mechanical process. The blood oozed into it from the cavity of the uterus; retarded by the closure of the external os, coagulation took place; the accretion continued; and thus, slowly, the enlargement came on. Finally the limit of the capacity of the part was reached and the external os gave way in dilatation.

ON THE CODE OF ETHICS.

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The length of time which has now elapsed since its publication, the high repute in which it has always been held, and the general lack of exact knowledge regarding its requirements, are facts which entitle the Code of Medical Ethics to rank with the sacred

writings of the human race. Another proof of the justice of this claim may be found in the growth and gradual attempt at formulation of certain popular beliefs and traditions concerning the document in question. Already we hear of distinctions between the spirit and the letter of the code. Questions of interpretation and matters of doubtful disputation concerning its text, occasionally arise to disturb the quiet of a medical society. All this clearly indicates that the age of comment has arrived. I, therefore, offer the following thoughts in the form of a commentary on the Code of Medical Ethics.

Article I.—*On the duties of physicians to their patients.*

The principal fact worthy of remark in connection with this article is a certain flavor of antiquity—an archaic style of expression—which pleasantly reminds one of the days when the round, red face of the portly old family doctor beamed upon the world over the horizon of a voluminous ruffle, and was kept in good countenance by the splendor of that magic wand which degenerate moderns only know as a gold-headed cane. This peculiarity, however, is not without its value, for it greatly assists the reader in the effort to place before his mind a picture of those happy ages when doctors and patients—especially the patients—shall adopt the code of ethics and regulate their entire existence by its wholesome provisions.

Article II.—*Treats of the obligations of patients to their physicians.*

It is impossible to resist the suspicion that this article was not contained in the original draft of the code. It wears the aspect of an interpolation which must have found its way at a later date into the body of the original text. In no other way can we account for the evident irrelevance of its matter, and its want of logical connection with the remainder of the document. Considered by itself, as a sermon addressed by a venerable laic to an inexperienced youth recently set up in housekeeping, it would rise beyond reproach. But in a paper which is designed for the guidance of professional men, it seems a little out of place to attempt the instruction of people outside of the faculty, over whom the doctor has no authority nor any opportunity for education in accordance with his notions of propriety. It might be

urged that the physician may rightly use the article in question as a tract for the instruction and elevation of the laity; but the difficulty in the way of such use lies in the fact that for persons who exhibit a capacity for this kind of training no such advice is needed; and for that vast majority who consider themselves the patrons rather than the clients of a physician, such counsels can only appear provocative to laughter at the expense of any "fussy old fellow who may pretend to tell them when and how they shall call on him for service" I suspect that the entire article was introduced as a concession to certain restive spirits in the drafting convention, who did not exactly relish the wholesale way in which they were being lectured as to their duties, and who could only be appeased by the insertion of something similar for the benefit of outsiders who were not doctors, but who often made their doctors feel as if the administration of a little wholesome advice would be a source of unlimited satisfaction.

On the whole, I think the dignity of the code would be increased by the omission of Article II.

The Second Section of the code treats *of the duties of Physicians to each other, and to the profession at large.*

Of this section, the first article is occupied with *Duties for the support of professional character.* The whole article is full of the most enlightened and liberal counsel for the guidance of the members of our profession; yet, hardly any article in the code is more persistently and consistently disregarded by physicians. How few, comparatively, there are who keep in mind the admonition of even the first paragraph of the article! As Dr. Fothergill wisely remarks, "Each ecclesiastic asserts the dignity of his office, however unworthy he may think some others are to fill it. * * * Another lesson, too, we might learn from them, and that is, the air of respectful gravity they assume at once when speaking of matters theological, and the readiness with which they check any levity of speech on such matters on the part of any one present. * * * It is quite time that we followed the example of the other professions."

There can be no doubt that much of the depreciation of the medical profession in the popular estimation is due to the unbridled license with which even respectable physicians, in con-

versation with the laity, will seek to undermine the reputation of a rival, and consider themselves perfectly justified in so doing, if that rival chances to belong to some other school of therapeutics than their own. We are too prone to forget that, among the common people, the difference between doctors is not as perceptible as it is among those who have the educational qualifications to judge of such things. For the laity, a doctor is a doctor; and if they hear the members of one wing of the profession speaking evil of the members of another wing, they generally conclude that their speech is based upon jealousy, and draw inferences as unfavorable to the evil speaker as to the evil doer.

The third paragraph of this article treats of the subject of advertising. Nothing can be more admirably conceived, and nothing is more often misconstrued. That this should be true seems rather strange at first sight; but I suspect that much of the misapprehension concerning the true meaning of the provision grows out of indifference to punctuation marks on the part of careless readers. The correct reading of the text is as follows:

"It is derogatory to the dignity of the profession to resort to public advertisements, or private cards, or handbills, inviting the attention of individuals affected with particular diseases—publicly offering advice and medicine to the poor gratis, or promising radical cures," etc.

That is clear enough, but, if I may judge from their behavior, a great many conscientious gentlemen read as if the comma which follows the word *handbills* were a semicolon, or even a full period. This changes the entire meaning of the sentence, and converts all advertising into an offense against the code. On the contrary, the article does not in any way disapprove of the use of "public advertisements, or private cards or handbills;" it only looks with disfavor upon the use of such methods as a means of "inviting the attention of individuals affected with particular diseases—publicly offering advice and medicine to the poor, gratis, or promising radical cures," etc., etc. It follows, therefore, that the well regulated physician who carefully studies his code, and is aware of the unquestionable value of advertising in all business avocations, will proceed to place himself as conspicuously

before the public as his brains and purse will permit. In the country villages he will take pains to keep in a prominent column of the local paper, a notice which will inform the public where and when he may be consulted by the sick. He will, very likely, place his business card upon the rack at the tavern, or the railway station, or the post-office. In every way that is consistent with good taste and the customs of the local society, he will seek to make himself known and respected by his fellow citizens of all classes. In the large cities, he will resort to precisely analogous methods; but since it is very expensive to publish a card in the daily papers, he will take pains to advertise in the directory, where his advertisement will be inserted free of expense. In this connection I may remark that the majority of physicians are too indifferent to this matter of advertising in the directory, where for a mere trifle every physician might secure the insertion of his office hours, to his own advantage and to the great additional convenience of the public. There is no ethical reason why the entire contents of the Medical Register should not appear in the City Directory. Very naturally, as the doctor grows prosperous, he will so much the less feel the need of keeping his name before the public through the aid of the press; but this fact should never betray him into any utterance in depreciation of the legitimate efforts of his younger or less fortunate brother.

Were this the place for a dissertation on the art of advertising, I might say much more regarding the matter; but I must leave that to the good sense of each individual, which should suggest numerous methods in perfect harmony with the letter and the spirit of the code. The very fact that certain methods of advertising are disallowed, is sufficient to show that other methods are permitted; and as the forbidden methods are precisely those which the largest experience has always found to be in conflict with the attainment of the highest degree of professional success, it is a logical inference that the code does not in any way discountenance such methods of advertisement as are really conducive to prosperity.

The fourth paragraph is clear, and unobjectionable in its purpose. The prohibition against the use of secret nostrums is, however well meaning the intentions of its authors, a little too

stringent; and as a matter of fact it is seldom regarded. Certainly, no one after learing their value was ever deterred from the use of James' Powder, or McMunn's Elixir, or Warburg's Tincture, or J. Colis Browne's Chlorodyne, or Tarrant's Seltzer Aperient, by the consciousness of ignorance regarding their exact composition. Still, as a general rule, the article may pass without a challenge.

The fourth article of this section treats *of the duties of physicians in regard to consultation.*

Of this article, the first paragraph bears evidence of having been carefully framed, in accordance with the euphuistic predilections of the authors, for the purpose of summary dealing with a dark and dismal subject which was too gross for open mention in such a rose-colored document as the Ethical Code. At the time of its composition the medical profession in America was annoyed and disgusted by a pestilent little group of ignorant fellows who were known as homœopathists. A somewhat similar set were called Thompsonians, or botanic doctors. These wretched creatures pretended to have come into possession of new light about the art of healing, and, being generally devoid of knowledge or sound morality, they had no scruples regarding all sorts of reprehensible courses which seemed likely to advance their personal interests.

The consequence was naturally a great outburst of indignation on the part of honorable physicians, and the rapid growth of a general determination to have nothing to do with the accursed thing. Expulsion of the devoted men from the medical societies was at once accomplished. They were denied recognition as physicians, and it was made an unlawful thing for a member of the profession to give them any aid or comfort whatever. The whole proceeding was finally clinched by the introduction into the Code of Ethics of the article now in question.

Time rolled on, and a whole generation has passed away since this decisive action of our ancestors. Here and there exists a survivor of those passionate days, who keeps alive and disseminates the tradition that this article was designed to prevent all consultation with homœopathic and eclectic physicians. Such is the fact, and probably no other article of the code has been more

faithfully regarded. Occasionally a hapless brother would transgress, but the eunuchs were always in waiting, and the bowstring or the axe soon made an end of the imprudent offender. All this, however, is now at an end. Rip Van Winkle awakes from his lifelong sleep, and the war of the 'pathies has ceased. Henceforth, it will be hard to find a doctor with whom the most fastidious regular practitioner may not consult.

Strange as it may seem, this great change has unquestionably taken place, and it will be wise for us to recognize the fact, and to shape our course accordingly. Let us see how the matter stands.

The article under consideration declares that: "No intelligent regular practitioner, who has a license to practice from some medical board of known and acknowledged respectability recognized by this (American Medical) Association, and who is in good moral and professional standing in the place in which he resides, should be fastidiously excluded from fellowship, or his aid refused in consultation." *Intelligence*, *regularity*, *license* and *morality* are the four corner-stones upon which rest a doctor's claim to fellowship with the faculty.

About the character of the qualifications covered by the terms *morality* and *intelligence* there is so little question that each individual practitioner can safely be left to judge of their possession by his neighbors. A "*license* to practice from some medical board of known and acknowledged respectability" can now be obtained in many of the States of the Union. The question of *regularity* is the only thing left for consideration. What makes one a "regular practitioner?" Hear the code!

"No one can be considered as a regular practitioner, or a fit associate in consultation, whose practice is based upon an exclusive dogma, to the rejection of the accumulated experience of the profession, and of the aids actually furnished by anatomy, physiology, pathology and organic chemistry."

Thirty years ago, there were men seeking recognition from the public as practitioners of the healing art, to whom this statement would apply, but now the race is almost extinct. A living Dodo or a Moa would hardly excite greater enthusiasm in ornithological circles than would now be aroused among scientific men by the

production of a genuine believer in the dogmas of Hahnemann or Thompson.

Since Mahomet would not go to the mountain, the mountain came to Mahomet. Driven into a corner, and forced to rely upon their own resources, these outlaws did what excommunicated heretics have always done. They organized themselves. They attempted to purge themselves of grossness and of palpable ignorance. They went to school. They studied human nature, and sought to win the secret of success. Many of them profess morality. Some are even respectable. They dissect. They walk the hospitals. They are deep in organic chemistry. Their autopsies are as numerous as their opportunities. They read our books, and are sometimes skilled in the use of our own favorite remedies. As for Father Hahnemann—*stat nominis umbra!* He and his beliefs are fast disappearing among the shadows of the past. We reverence Galen and Hippocrates, though we rarely do their works. Let these men canonize whom they will, they are men of to-day and not of the past. In what more then, do such men need for the successful prosecution of a claim to the title of *regularly educated physician* in the meaning of the Code of Ethics? They are physicians—they are educated physicians—they are regular physicians in the sight of the law.

In this interpretation of the article now before us, I can arrogate to myself no priority of thought. It is the expression of a conviction which has long been half concealed in the hearts of progressive men, and the time seems ripe for its utterance. Of course, it is too much to expect that such doctrine will secure unanimous assent. It is too much to expect that the fathers of the profession will consent to meet on equal terms the hoary knave whom they have known since youth as a villain past redemption. Nor is it desirable that such a consummation should be arrived at. Moral character—not scientific opinion, should be the touch-stone of consultation. If by refusing to consult we could deprive every ignoramus of his legal right to practice, the case would be different; but the law has taken from us all such responsibility; consequently, when a man has received his license as a qualified physician, there should be an end of discussion about his recognition as a medical practitioner. But if his moral char-

acter is bad, any physician should be at liberty to refuse, on that ground to consult with the offender. This liberty the code already gives—what more do we need for the protection of the much talked of "honor and dignity" of the profession in the matter of consultation?

Did time permit, I might enter at length upon a discussion of the wisdom or unwisdom of the catholicity thus licensed by the code. The subject is now under discussion elsewhere, and many who see that the old barriers have given way are clamorous for new articles which shall restore the former stringency of non-intercourse. But to the intelligent eye it is evident that "old things have passed away," and that a new order has arisen. There will be much lamentation and many wild regrets when it is discovered that Great Pan is really dead, but the true philosopher will rejoice at everything which marks the decline of bigotry and of sectarianism in medicine as well as in religion. Very likely the American Medical Association may be compelled to frame a new article which shall reach the modern "liberal" homœopathist as the old one does not; but the effect of such action will only delay—will not arrest—the inevitable. There are plenty of independent men in the profession who will then boldly say, that the old code is good enough for them, and they will refuse to surrender their new found liberty by reason of any illiberal out-cry in behalf of non-intercourse.

The remaining paragraphs of this article contain nothing that does not commend itself to the good sense of every one. The same thing may be said of the entire contents of Article V. It is only when we reach the second paragraph of Article VI. that anything appears worthy of comment. If this injunction had been always rigidly observed, many of the schisms which have rent the profession, and many of the too willing martyrs who have been offered up in the presence of an unappreciative and scoffing public, would never have been known. It is too late to remedy the scandals of the past; but if it had been possible to follow the examples of other associations, whose discipline and whose punishments are hidden from the public eye, it would have been far better for the reputation of the medical profession. The spirit of this article is utterly opposed to that ecclesiastiform

intolerance which has rent us in twain, and has set up a number of jarring sects where all should have joined in one united front for the common good. I hardly need remark that it is, moreover, wholly opposed to such use of the public press, even in the form of a medical journal, as may be calculated to discredit the parties to a difference of opinion about those "points in medical ethics and etiquette through which the feelings of medical men may be painfully assailed in their intercourse with each other."

The concluding section of the code treats *of the duties of the profession to the public, and of the obligations of the public to the profession.*

The first paragraph declares that physicians should "be ever ready to give counsel to the public, in matters especially appertaining to their profession, etc."

This admonition is too often forgotten by the faculty. The medical societies rarely add anything to the knowledge of the public, and the men of learning and experience in the profession almost never break silence for the benefit of any but their own patients. The only attempts to obey this article are made by a few reckless spirits, who, having no reputation to lose, are quite careless about the accuracy of their utterances. Occasionally, there will be a few words of warning or of self glorification from some local sanitary corporation; but, as a general thing, the members of the profession exhibit no desire for the authoritative instruction of the communities in which they dwell.

For this negligence there are several reasons, of which not all are entirely creditable to the faculty. It is easy to see that the doctor who has achieved success by dint of unremitting toil is not very likely to occupy his rare moments of leisure with the painful effort to compose a letter for the columns of the daily paper. Nor is the scholarly young physician any more willing to forego the satisfaction of seeing his work in the current medical journals for the sake of attempting the very difficult task of explaining to an untrained audience matters connected with what must necessarily for such people be an occult science. These difficulties are themselves almost sufficient to deprive the laity of all the advantages which might accrue from the guidance of the best minds in

the profession, acting through the medium of that universal school-master—the daily paper. But when to these causes are added the weight of opprobrium which is invariably thrown by the mass of the profession upon anyone who endeavors to obey this article of the code, it is impossible to escape the consequences of such action, and we necessarily find the transient literature of the day almost entirely abandoned to the guidance of the worst representatives of a learned profession. Whence springs this opprobrium which undeniably operates with such force? We are told that it is the proper expression of zeal for "the honor and dignity of the profession" in accordance with the Code of Ethics, which prohibits advertising in the papers. When the inaccuracy of such an assertion is exposed, we are told that the code forbids "inviting the attention of individuals affected with particular diseases;" and it is assumed that a physician cannot appear in print without thus, directly or indirectly, associating himself before the public with some particular disease or class of diseases. Here, then, we find the secret spring of that anxiety about "the honor and dignity of the profession," which is so rampant whenever any accident gives the newspaper-reading portion of the community the smallest ghost of a chance for the inference that one physician may know more than another about certain branches of his calling. It is really not so much a righteous zeal for "the honor and dignity," etc., as it is an expression of professional jealousy.

I do not complain of this, for it is exceedingly characteristic of human nature; but I do complain of calling things by wrong names. It is a fact, beyond question, that the insertion of this clause—"inviting the attention of individuals affected with particular diseases"—is not so much a necessary provision for the honor of the profession, as it is a concession to the weakness of human nature. Men do not like to be reminded of differences which actually exist. I, therefore, find no fault with the restriction. I would not advocate its removal, for, if it were rescinded, and we all should advertise our little pet specialties, we would not one of us be any the better off in the long run. A solitary occupation of the field is the only thing which can give medical advertisements any value.

It is, in this connection, impossible too strongly to deprecate that hyper-ethical feeling which would prohibit men of good judgment and remarkable opportunities for experiment from a public expression of opinion regarding the value of articles which are offered to the public for therapeutical purposes. At present, no one but a quack can utter an opinion which is likely to find its way into the papers without drawing upon himself the fire of all the ethical champions along the line. Consequently, the public is left to the direction of the worst guides possible, or else it must depend upon the published statements of distant authorities, whose value cannot easily be appraised. It is all very well to tell me—a simple tradesman—that Professor Bamberger, of Vienna, recommends the Hunyadi Janos water; but that is not enough. His certificate may be a forgery; I know nothing about the honesty of the man; I want to know what Dr. Allen thinks about it, for he is my neighbor, and I can ask him about the genuineness of his opinion. That is the way the laity think about these things, and it is wrong to deny them this advantage for the sake of gratifying that spirit which, appearing upon the platform with Dennis Kearney, we denounce as communism, but which, when it looks innocently from behind the Code of Medical Ethics, we call *zeal for the honor and dignity of the profession.*

I am well aware thut with many excellent men, the whole discussion is terminated by the assertion that the course which I defend, would be liable to great abuse. Against this objection I would urge the words of Oliver Cromwell: "It will be found an unjust and unwise jealousy to deprive a man of his natural liberty upon the supposition that he might abuse it. When he doth abuse it, judge." If our medical societies were so organized and conducted as to represent the majority and the quality of the faculty, they could easily forestall the private certificates of individual members of the profession, by a proper discharge of their duties to the community through official instructions regarding the character of articles which are introduced to the public notice. But while the present medical chaos is permitted to exist, the opinion of individual experts will be preferred before the deliverances of any local body which has yet its own reputa-

tion to win. And if it were the custom thus to pronounce in public upon the quality of articles presented for judgment, the men whose opinion is sought, would be wary enough in the matter of their endorsements, instead of being, as now, liable to fall into the trap of any more than an ordinarily cunning adventurer.

The folowing advertisements appear regularly upon the covers of the most widely circulated English literary magazines:

"A healthy skin and good complexion by using Pears' Transparent Soap. The best for Toilet, Nursery and for Shaving. Recommended in the *Journal of Cutaneous Medicine*, by the Editor, Mr.

ERASMUS WILSON, F. R. S.,

As the most refreshing and agreeable balm for the Skin."

"The only Soap for the Complexion. Making the Skin Clear, Smooth and Lustrous.

WRIGHT'S COAL-TAR SOAP.

Highly and extensively recommended for the Toilet and all cases of Cutaneous Disease by MR. JAMES STARTIN, M.R.C.S., Surgeon to St. John's Hospital for Disease of the Skin; the late MR. JAMES STARTIN, M.D., F.R.C.S., of Saville Row; MR. MCCALL ANDERSON, M.D., F.F.P.S., of Woodside Crescent, Glasgow, and the other leading members of the profession."

Thus interpreted, our code of ethics stands, the embodiment of a wise and liberal policy. Our fathers "builded better than they knew;" and only jealousy and bigotry can ever mar their work. In the debate which has now begun, may the truly catholic doctrine prevail!

TREATMENT OF UN-UNITED FRACTURES.—(*Med. Press & Circ.*, July 3, 1878.) Mr. Fitzgerald, surgeon to the Melbourne Hospital, in view of the unsuccessful results attained by milder or severer remedies used in treating these cases, strongly advocates the injection of glacial acetic acid, 0.3—0.6, by means of the hypodermic syringe, between the un-united ends of bone. His experience with this method has been uniformly successful. It is attended by sharp pain at first, which quickly subsides. Any cartilaginous thickening that may have been present at first is soon resolved and absorbed, and bony union takes place rapidly, proper position of the fragments being secured by splints.

Foreign Correspondence.

No. I.

THE USE OF THE HYDRATE OF CHLORAL PER RECTUM.

Dr. Starcke, Oberstabsarzt, of Berlin, contributes to the *Berliner Klinische Wochenschrift*, No. 33, 1878, an article on the above subject, of which the following is a résumé:

"Concerning the continued use (*den chronischen Gebrauch*) of the hydrate of chloral, the minds of the profession at the present time are so divided that I consider it of importance to discuss the subject, especially as the English have lately appointed a commission to study the question of *chloralism* as compared with *morphinism*.

"The prejudice against the frequent use of the remedy in England is very great, produced, perhaps, by the evil consequences that are said to have followed its administration, especially in the cases of those who were the victims of chronic alcoholism.

"I cannot deny that I myself had formerly the greatest fear of the use of this hypnotic, produced, perhaps, by a single fatal result that I saw follow the use of a small dose of morphine in an illy-nourished patient, and which caused me to afterwards use sparingly all remedies of this class where the patient was extremely anæmic.

"A few years ago I was taken ill of chronic gastric catarrh, accompanied by an extremely acid condition of the contents of my stomach.

"I became more and more emaciated, lost weight rapidly, and had the general aspect of one suffering from cancer of the stomach.

"In my case, one of the greatest obstacles to a convalescence was a most persistent sleeplessness.

"Although in the evenings I felt the most extreme weariness, and fell asleep as soon as I retired, I would uniformly awake after from one-half to one hour's slumber with my mind full of the events of the day, roll and toss from side to side, perhaps getting a little additional restless sleep toward morning.

"I had now become not only weak in body, but low-spirited, and had entertained the worst forebodings as to the final result in my case.

"I concluded at this juncture to consult a colleague on the subject of the use of the hydrate of chloral.

"Having determined to give the remedy a trial, and wishing to avoid the introduction of anything into the stomach that would increase its irritability, I resolved to use it per enema.

"For this purpose I used an ordinary syringe, with a somewhat long tube attached. injecting 10 grams of a 5 per cent. solution at a temperature of 35°, and after a quarter of an hour I repeated the same quantity, so that in all I used 1 gram of the hydrate of chloral.

"A few moments after its introduction I experienced a feeling of bearing down and slight tenesmus, which was soon followed by a sensation of general comfort, an inward calmness of soul, a convincing evidence of that quiet that was to take the place of my former sleepless nights.

"I soon fell asleep, and had a dreamless repose of five hours, and in fact a comfortable night's rest.

"In this manner I used the hydrate of chloral every night for five months.

"The consequence was that from the day I began its use I began to convalesce.

"From the first my sleep was natural. I awoke with a good appetite, without headache, without stupor, and with a feeling of thankfulness toward an agent that had given me the only quiet sleep that I had had for years."

The doctor says that in spite of its continued use, the effect of the remedy remained the same, although he did not increase the dose, but in fact, as he grew better, he was able to get his night's

rest by using only one-half the quantity with which he first began.

By the use of other appropriate treatment for his gastric disease he rapidly grew better, so that during the five months that he took the chloral he gained 30 pounds in weight. He farther says: "I wish to especially emphasize the fact that I had nothing like morphinism produced by its use.

"I had no appetite or desire for the medicine. I lay down every night with the hope that, by the continued improvement in my general health, I would soon be able to sleep spontaneously.

"For the last month I have kept the chloral on my table, as one would carry an umbrella in fine weather, happy in not having to use it.

"Since I have discontinued its use, I have had at no time what could be called a weaning period.

"The use of the hydrate of chloral per rectum has an especial application in diseases of the stomach, on account of its irritating effects upon that organ. I tried twice to take the drug by the mouth, suspended in the yolk of an egg.

"Each time a few moments after I had swallowed the dose, I vomited until I had expelled everything from my stomach, and had none of the soporific effects of the remedy produced.

"One of the principal advantages of using the drug by enema is that it does not undergo that decomposition which it always does when taken by the stomach, on account of its coming in contact with the contents of that organ."

The writer dwells upon the necessity of procuring a pure specimen of the drug, in order to obtain its good effects, and recommends especially that manufactured by Liebreich, of Berlin.

"I found that all the disagreeable sensations about the rectum produced by the injection of the remedy were confined to the external margin of the anus, and that all that was necessary to avoid this is to use an instrument with a long tube attached, and exercise some caution to prevent the fluid coming in contact with the external sphincter.

"Care should be taken to have your remedy well dissolved, and it should be used at a temperature near that of the human body.

"The size of the dose necessary to produce a hypnotic effect is so small that it cannot be dangerous."

The doctor claims to have used this drug largely in his own practice, as above recommended, and with uniformly the most happy results. In consequence, also, as he asserts, of a growing fear of the use of morphine hypodermically, by the profession at large, in Germany, he thinks the use of the hydrate of chloral is destined to obtain a large field of usefulness.

"In a large number of old people who constantly trouble the physician on account of their sleeplessness, I have found the use of this remedy in the manner above described to be of especial benefit; but I should limit the dose given to 1 gram.

"I believe that this dose of the drug used in this way, can have no worse effect than a simple glass of strong wine, which is so often prescribed for this class of patients.

"In conclusion, I would say that in my own case, as well as in the cases that have occurred in my private practice, I have seen no injurious consequences either to the nervous or digestive systems, follow as a result of the effect of the medicine, even when the same was continued for months."

In the minute directions that Dr. Starcke gives for the use per enema of the hydrate of chloral, I think he has omitted one important point, and that is, that the rectum should be well cleared out by an injection of warm water before the remedy is used, if we are going to be sure that we will have none of the obstacles to the complete action of the drug that he claims we are so likely to have when it is given by the mouth.

W. S. CALDWELL.

PARIS, Sept., 1878.

No. II.

LAPAROTOMY.—SUCCESSFUL EXTIRPATION OF FLOATING KIDNEY.

In visiting the surgical wards of the hospitals of Europe, and contrasting what I now see, with what I saw when abroad twelve years ago, there is no procedure in surgery that strikes me as having made so rapid a stride in that time as laparotomy.

An operation that a quarter of a century ago was considered fraught with the greatest danger, is now resorted to by many of the operators on the continent, with apparently as little hesitation as that with which the ordinary surgeon will open an abscess.

Soon after I came to Berlin this summer, Prof. Schröder brought a woman before the class who had a large abdominal swelling which he thought was an ovarian fibroid tumor; but not being well satisfied as to the diagnosis he proposed to make an abdominal section, in order to clear up this point, as well as to see what could be done in the way of relief by the knife.

He made an incision in the median line extending from near the symphysis pubis to the umbilicus, brought the tumor well into view, in fact brought with it a large portion of the small intestines entirely without the abdominal walls.

The growth proved to be a cancer of the mesenteric glands, and so attached that its removal was out of the question.

The wound was closed up and dressed with Prof. Lister's dressing—the operation having been done under the carbolized spray —and the patient recovered without an untoward symptom. In a paper on ovariotomy lately read by Dr. Martin, before the *Berliner Medicinische Gesellschaft*, he took strong grounds in favor of the almost absolute safety of this operation when properly and antiseptically done.

During the discussion of this paper, Dr. Küster related that he had lately opened the abdomen freely, to clear up the diagnosis in a case that proved to be one of carcinoma of the left ovary, having extensive attachment with the peritoneum. Removal could not be effected.

The wound was closed up, healed by first intention, and, at the end of eight days, the patient was as well as usual.

When she afterwards died from the effects of the cancer, the autopsy showed that the effect of this grave operation had left no traces behind it, save the slightest remains of a circumscribed peritonitis in the median line.

The speaker (Dr. K.) believed that in case of abdominal growths, where it was impossible to arrive at a correct diagnosis by other means, that laparotomy might be resorted to with absolute safety.

This discussion brought up another question of great importance to the ovariotomist, which is that of the carbolic acid poisoning said to sometimes follow the use of the carbolized spray.

Dr. Martin was of the opinion that the dangers from this accident were greatly over-estimated, while Dr. Küster believed that in case of children or very anæmic persons of adult age, that a solution of from 2 to 2½ per cent., used as a spray, was very dangerous.

The latter gentleman related a case of ovariotomy that he had lately done, under a spray of thymic acid, the patient having recovered without any bad symptoms, and he strongly urged this agent as a substitute for the carbolic acid. He used it of a strength of 1-10th per cent., and considers it as absolutely free from any danger of a toxic character, as well as being equal to the carbolic acid as an antiseptic agent.

During the past winter I saw Prof. Billroth perform ovariotomy under the spray; the patient, soon after the operation, passed into a comatose condition, and died, as Prof. B. thought, from carbolic acid intoxication.

After that the room (a small one) in which these operations were done, was thoroughly impregnated with the carbolized spray, but none was used at the time of the operation itself.

On the other hand Prof. Shröder, of Berlin, does all his ovariotomies under a 2 per cent. carbolized spray with the most happy results, and has no fears of any injurious influence from this agent.

Since last February, Prof. S. has done this operation forty-five times with only four fatal results, and of his last thirty patients he has not lost a single one. In performing ovariotomy Prof. Shröder uses no clamp, and dispenses with all drainage.

The cases that I saw him operate upon, were simple ones, with no very great extent of adhesion. He tied the pedicle with a silk ligature and closed up the abdominal walls completely. I asked him if in case of extensive adhesions and considerable hæmorrhage he would not adopt some form of drainage. His reply was that in his early operations it was his custom to use some method of drainage, but that latterly he had used none, and since this change his results had been much more favorable.

Billroth always used, in the cases I saw him operate upon, the ordinary drainage tube draining through the abdominal walls dropping the lower end of the tube well down into the cul de sac of Douglas. His statistics I believe are not good as compared with those of other prominent ovariotomists.

I saw Prof. Shröder extirpate the entire uterus in a woman, 42 years of age, for cancer of that organ. The patient made a good recovery, though not without considerable constitutional disturbance. This was his third operation of the kind, only one of the cases proving fatal.

I assisted Dr. Martin in the performance of this same operation on a rather delicate woman of 47 years of age. In her case the pelvic lymphatics were found considerably involved, and, in the doctor's efforts at their removal, the patient lost considerable blood and never reacted well after the operation, dying 18 hours after it was performed.

EXTIRPATION OF THE RIGHT KIDNEY.—On the morning of July 25th I assisted Dr. Martin in the performance of the operation named above.

The patient was an unmarried woman, aged 29 years, and had one child. For the last two years she had suffered most intensely from a pain in the right hypochondrium, extending around the entire diaphragm and down as far as the right iliac fossa.

The patient, although apparently in moderate health, had scarcely as she asserted, been free from pain for the last year.

Physical examination showed her to be suffering from a floating kidney; and although the organ was far less movable than in many of the cases I saw in the private course of Dr. Oser, of Vienna, her sufferings were all attributed to this cause, and hence this very grave operation was resorted to.

An incision was made in the median line, extending from near the ensiform cartilage to the umbilicus. After this free incision was made, it was found that the kidney had fallen so far back into its natural position that it could not be reached until the patient had been turned nearly on to her abdomen.

The organ was now caught with a strong pair of rat-tooth for-

ceps, brought forward toward the opening in the abdominal walls, and its peritoneal covering divided by the knife.

The vessels that supply it were next ligated by three strong silk ligatures applied about three centimeters distant from the kidney itself, leaving a long flat pedicle after the organ was cut away.

The hemorrhage that followed the operation was considerable, but great pains was taken to remove all blood from the abdominal cavity by means of sponges wrung from a 2 per cent. solution of carbolic acid.

The wound was closed in the usual manner and dressed antiseptically, the operation having been done, of course, under the spray.

The patient was now placed in a well-ventilated and isolated room, kept perfectly quiet, not being allowed to even raise upright to pass her urine.

To give some idea of the constitutional disturbance that followed the operation, I append the following notes of her temperature:

July 25th, 8 o'clock a. m., temp., 36.4°. On the following days the temperature ranged thus: 26th, from 37.3° to 38°; 27th, from 37.3° to 38.7°; 28th, 38° to 39°; 29th, 37.5° to 38.6°; 30th, from 37.9° to 38.3°; 31st, from 37° to 38°; August 1st, from 36.6° to 37.5°.

I watched the patient for a month, during the first three weeks of which time she had every day a slight elevation of temperature.

When I last saw her she was nearly convalescent. The urinary secretion was about two-thirds of the normal amount for the first three weeks, and near four-fifths after that, and never was markedly altered in its chemical constituents.

This is Dr. Martin's third operation of this kind, and, wonderful to relate, his cases have all recovered.

Professor Billroth (I believe) has done the operation the same number of times but his cases have all died, though I think they were all performed for malignant or other diseases of the kidney. Professor B.'s mode of operating is to make an incision through the lumbar region, reaching the organ with less violence, as he thinks, to the peritoneum and adjacent tissues.

Dr. Oser claims that one woman in ten, who have borne children, have a movable right kidney, which he attributes to the loose manner in which this organ is bound down by its peritoneal attachments on this side, the ascent of the uterus during pregnancy loosening up these attachments.

He further claims that this affection plays an important role in the nervous diseases of females, which is often overlooked by those who are not accustomed to the more minute methods of physical exploration.

W. S. CALDWELL.

PARIS, Sept. 20th.

Domestic Correspondence.

THE LAW OF ILLINOIS CONCERNING INSANE PERSONS.

The following open letter has been addressed to the Board of State Commissioners of Public Charities of the State of Illinois, Hon. George S. Robinson, President, by Dr. R. J. Patterson, of Batavia, Illinois:

The law of Illinois regulating the commitment of insane persons to hospitals is peculiar. The like of it does not exist in any other State or country.

Your Board of Public Charities, to which, in a special degree, the welfare of the insane is by law committed, is properly looked to for any suggestions in regard to needed changes in this law; and in the absence of any suggestions, changes are not likely to be made.

The law appears to me to be objectionable from a medical point of view, and I deem it proper, therefore, to call your attention to some of its objectionable features:

The Trial by Jury. It is not claimed by anyone that the jury trial confers any protection or other benefit upon the really insane. It is humiliating, offensive and hateful to those of them who have not lost nearly all perception and sensibility. It is also odious to the family and friends of the insane, as shown by the fact that they often seek to evade it.

It is alleged that the jury trial is necessary to protect sane persons from imprisonment by mistake or fraud.

I reply, that the jury trial has not been found necessary or desirable in other States or countries; and the evils sought to be avoided, if they ever existed, must be of exceedingly rare occurrence, and that mistakes and fraud are possible, and do actually exist, under the present law.

The following letters show that persons have been tried by jury and committed to hospitals who were not insane. They also show that persons who were really insane have been subjected to the ordeal of more than one trial, because of the incompetency of the jury to weigh the evidence which proved the insanity; therefore, neither the personal liberty of the sane nor the welfare of the insane is secured by the present law. So easy has it been found to either deceive or suborn a jury, that simulating criminals gain admission to hospitals as means of escape, while the insane are kept waiting:

ILLINOIS CENTRAL HOSPITAL FOR THE INSANE,
SUPERINTENDENT'S OFFICE, JACKSONVILLE, Ills., Sept. 11, 1878.

DR. R. J. PATTERSON—*Dear Sir:* Your letter of the 9th inst. is received In answer to your first question, as to whether any person or persons, who were not insane, have been declared insane by a jury, I would say, I have in mind two cases. Both were arrested for some criminal act, showed symptoms of insanity while in jail, were "tried for insanity," and, by a jury, found insane. Both were sent here, and both escaped, after a brief stay with us. I think neither was insane.

Answer to second question: It has not unfrequently come to my knowl edge, where persons have been subjected to a second trial, before the neces sary verdict to commit them to the hospital could be obtained.

Yours, very truly, H. F. CARRIEL.

NORTHERN HOSPITAL FOR THE INSANE,
ELGIN, Ill., Sept. 17, 1878

DR. R. J. PATTERSON, BATAVIA, Ill.—*My Dear Doctor:* Replying to your letter of inquiry of the 9th inst., I have to state that during the past five years four men and two women, resident in adjoining counties, have been adjudged insane upon jury trial before our county courts, in accordance with the requirements of the statutes of this State, and duly committed to this hospital as "fit persons for detention and treatment here," who, upon investigation, were found to be "*not insane*," and consequently dismissed from the custody of the institution and given their full liberty again. I will state further, that many instances have come to my knowledge where *insane persons* have been subjected to *two or three jury trials* before being declared insane, and this in the face of the clearest evidence as to their derangement, if analyzed by those competent to weigh testimony of this kind. Of course this is all *wrong*, as it not only retards treatment

in the early stages of the disease—its most hopeful period—but wounds, nay, outrages the finest sensibilities of our being, and works an injury to the insane and their friends that is well nigh irreparable. I should be glad to see some change in the law that would do away with these "criminal proceedings." Very truly, yours,

EDWIN A. KILBOURNE.

The above letters, from the medical superintendents of two of our State hospitals, are high testimouy. It is beyond a reasonable doubt that no less than eight persons have been committed to two of our State hospitals by jury trials who were not insane. I challenge anyone to show such monstrous abuses under any other legal proceedings in the history of the State.

It is a fact well known to the medical profession, that very early treatment is the most important factor in the restoration of insane persons to health. It is generally admitted, also, that the well conducted modern hospital affords the best known means for successful treatment. Whatever, therefore, puts a hindrance in the way of the promptest admission to early treatment of the insane vitally injures them.

The jury trial in open court, having the forms of a criminal procedure, the publicity given to it, the crowd of spectators often present, the delicate nature of the testimony sometimes demanded, the public exposure of infirmities which are the offspring of disease and not of crime, the danger in some cases to health and life from exposures, all tend to render the jury trial so objectionable and so offensive to the family and friends of the insane, that commitment to a hospital is likely to be delayed until the last degree of endurance has been reached, and the most favorable period for successful treatment has passed. Our large hospitals and our poor-houses are over-crowded with the chronic incurable insane, notwithstanding the fact that the State has provided for the care of more than 1,000 patients within the last ten years, while the present law has been in force. Is it not possible that the detestation in which the law is held, and the consequent hindrance to early treatment, may afford, in part at least, an explanation of the large number of incurable cases at last thrown upon the State and county for support?

The law, instead of facilitating the attainment of the promptest protection and relief to those who are helpless and dependent

because of dethronement of reason, makes those who are exempt from mental maladies and disabilities, the special objects of its paternal solicitude—though not one single authenticated case of abuse under previous laws had been adduced as a reason for departing from such legal proceedings as were in accordance with science and humanity.

If anyone asks why the law is shocking to the sensibilities of the insane and their friends, let him attend some of these trials, or glance at the reports of them in the daily newspapers. In the Chicago *Tribune* of June 21, 1878, appeared the following paragraph:

"In the County court, yesterday morning, a number of insane cases were called. The industry of the "*professionals*" in trying to get on the jury to try these unfortunates, on account of the two dollars in the job, was amusing, and was commented on quite freely. Some of the "professionals" succeeded in getting places, and, after considerable delay, the trials proceeded."

Another paragraph in the Chicago *Tribune* of August 22d read as follows:

"To-day is insane day in the County court, but, the judge being absent, no trials will be had. The insane now in jail, and around the police stations, must wait. Somebody is to blame, and cannot be blamed too severely. The unfortunates have committed no crime that they should remain in prison. A year ago, during the adjournment of the County court, all such cases were disposed of in the Criminal court."

Thus Illinois, in her zealous care to protect sane people, imprisons in a felon's cell insane persons for an indefinite period, awaiting the execution, possibly in a criminal court, of the provisions of her sardonic law.

On the 11th of June, 1878, eleven cases were set for trial. The "professionals" doubtless succeeded in getttng on the jury and obtaining the two dollars in the "job." Of these eleven defendants, he whose case was called last, was possibly compelled to listen not only to the evidence in his own case, but to the incoherent vociferations as well as the testimony in regard to the ten other defendants whose trial proceded his. Comment is unnecessary, further than to say that such treatment and exposure of the insane is not humane or even decent, and it seems incredible that any right-minded man of ordinary perceptions and sensibili-

ties should regard such court-room scenes with feelings other than those of detestation.

The laws of England and Scotland in regard to the commitment of insane persons to hospitals, are the result of long experience and intelligent observation. In England, insane persons are committed to hospitals upon the certificate of two physicians, and the written order or request of nearest relatives, friends or guardians. In Scotland, in addition to the forms required in England, the intervention and order of a magistrate is required. Nowhere in Christendom is the trial by jury thought necessary, except in the State of Illinois.

The Earl of Shaftsbury, for many years chairman of the English Lunacy Commission, recently gave evidence before a parlimentary committee of inquiry as to the lunacy laws and condition of the insane, as follows :

"What I state shows the absolute necessity of paying great attention to the earliest stage of the disorder; and though I could by no means render admission into the asylums more easy than it is, I most undoubtedly would not render it more difficult."

When asked directly as to his views of the Scotch system of the interposition of a magistrate (page 518) and its incorporation with English law, he says: "I am sure it would be most repugnant to our tastes and feelings to have the civil magistrate interpose in these matters." "It would be no protection whatever." "I cannot conceive of anything which to my mind would be worse. I will do anything I can in the world to protect the patient; but I know if I were to assent to do what is proposed, I should assent to that which would be doing him an irreparable evil."

C. S. Percival, secretary of the Commissioners of Lunacy, says: "In my opinion the medical certificates are the most important safeguards to the personal liberty of the subject, and the present forms are sufficient."—Page 461.

Dr. Fox says: "I do not think the intervention of a public officer would be of any material value at all to the liberty of the subject; it would oppose an additional difficulty to the earlier treatment of insanity, which is so very important."—Page 463.

Mr. Wilkes, Commissioner in Lunacy, says: "The present law is quite sufficient to protect the personal liberty of the people."—Page 265.

Dr. Lockhart Robertson would have as a commissioner "a leading physician in the district (asylum district) to renew the medical certificates upon which the patient was originally admitted."—Page 467.

Dr. Bucknill says: "I think the principle should be to make the admission as easily as possible, to provide for early treatment."—Page 473.

Dr. Maudsley "was strongly of the opinion that the present forms for the admission of private patients are quite sufficient, and, if made more

stringent, would operate injuriously to their early treatment and chances of recovery."—Page 490.

"If it is considered desirable, as I have heard suggested, that the medical certificates go before some public officer before they are acted upon, it seems to me no public officials would be better qualified than the commissioners (of lunacy), to whom exact copies are now sent within twenty-four hours. If the matter were really entered into in each case, it would be a very anxious responsibility—a formidable matter to undertake; if not, it would simply become a mere matter of routine, which, adding to the publicity, and adding to the expense, and adding to the delay of getting a patient under care, would make early treatment more difficult than it is."—Page 494.

Question 3744: "You think that if there was more care taken, or more delay in admitting or consigning patients to asylums, their cure would be more doubtful?"

Answer: "Undoubtedly, there are two great objects to be kept in view with regard to the detention of patients; they are put under care, not only for their own safe custody, because they are dangerous to themselves or others, but another and most important object, if insanity is to be cured, is, that they be put under care for treatment, and early, because recoveries are entirely in proportion to the early stage in which treatment is adopted. If regulations are made more stringent than they are now—and indeed the present regulations operate, to some extent, in that direction—the friends of patients will, instead of sending them from home, as is almost essential in a case of insanity—unlike, in this respect, other diseases—keep them at home under improper conditions, and so very much injure their chance of recovery."—Page 492.

"It is my experience, as a physician, that the friends shrink very much from that [going through forms]. They dislike the supposed publicity of it; they dislike the formality pronouncing him a lunatic; and they will not remove him in consequence."—Page 492.

Dr. Mortimer Granville says: "I think the best plan would be for a patient to be sent, under ordinary circumstances, to an ordinary hospital, immediate notice being given to the Commissioners in Lunacy, who would instruct some official on their behalf to visit and certify to them the condition of the patient and expediency of retaining him."—Page 502.

Mr. Charles P. Phillips, Commissioner in Lunacy, said: "In twelve years of experience as a Commissioner in Lunacy, he had not known a case where a person, being sane, had been improperly confined in an asylum."

Those of the medical profession in the United States who have given most thought to the welfare of the insane, and who are, therefore, most entitled to hold opinions, substantially agree with the Earl of Shaftsbury, the English Lunacy Commision, and the medical profession in England and Scotland.

Every physician knows that the removal of certain cases of puerperal insanity to court-houses in cold weather, to localities

distant from the patient's house, may endanger not only the recovery but the life of such patient. There are risks, it is true, from exposure in removing them to a hospital—but this is a necessity. No humane reason can be assigned for an added risk which in some cases is little less than homicidal.

The law is objectionable, because the jury trial exposes to public comment in detail, family diseases, infirmities and infelicities which the public have no claim to know.

The law is objectionable, in that it debars non-residents the privilege of receiving treatment at *private expense* within the boundaries of the State. If an insane person should be brought by friends for temporary treatment at private expense, from the State of Wisconsin to any place in Illinois where insane persons of the private class are treated, he cannot receive treatment without the jury trial and this cannot be obtained, the courts having no jurisdiction in such cases. This proscription bears heavily on the patient. It is not humane, nor does it regard the comity which should exist between States.

In short, the law, by its hard condition, practically works a hindrance to prompt treatment of the insane while there is most hope of recovery, and thus tends to fill our hospitals with incurable cases. It is my belief that it entails upon the State a life-long support of many, and a life-long suffering upon some who might be restored to health by the earliest and best treatment.

Allow me respectfully to suggest to the Board of State Charities, which has the welfare of the insane to a special degree in its keeping, that the personal liberty of the individual may be preserved more fully than it now is, and yet the evils of the jury trial in cases of insanity done away with. I would by no means jeopard the liberty of the individual, but would make it more safe than it now is, by leaving the question of insanity with those equally honest and more competent than the average juryman.

In the State of New York, the requirements of the law, which are especially commendable, for the commitment of an insane patient to an asylum are:

1. A certificate of two physicians, under oath, setting forth the insanity of such person.

2. That the physicians signing the certificates must be duly

qualified as medical examiners in lunacy, by being certified by a judge of a court of record as possessing the requisite qualifications; that the certificates shall be made on personal examinations of the patient, in accordance with forms prescribed by the State Commissioner in Lunacy, and bear date of not more than ten days prior to the commitment.

3. The certificates must be approved by the Judge of the county or district in which the patient resides.

On account of those who see safety only in the jury trial, this may be *permitted* in every case, but it should not be *compulsory* in every case.

I will suggest a return, in part only, to proceedings under the old law. Unless the New York law is satisfactory, I would require, as a prerequisite of admission to a hospital, in each case, the sworn certificate of a commission, to be appointed by any court of record, this commission to be composed of two physicians and a lawyer. It should be the duty of the commission to visit the person alleged to be insane, and to report, in writing, directly to the court, its opinions and the reasons for them. The court, in its discretion, may approve the finding of the commission. In case the court should fail to be satisfied with the report of the commission, it should have power to call a jury, and should be required to do so whenever the trial is demanded by the person alleged to be insane, or by any citizen of the State.

A law after this project would not be less exacting than the most rigid code of any of the United States, nor that of England or Scotland.

Respectfully,

R. J. PATTERSON, M. D.

BATAVIA, ILL., October 1, 1878.

THE librarian of the Chicago Medical Press Association hereby acknowledges the receipt, from the Woman's Hospital Medical College of Chicago, of a collection of books, consisting of 44 bound volumes and 158 Journals.

GENERAL LIBRARY University of MICHIGAN

Editorial.

TWO PICTURES.

On the 12th day of October last, Judge Williams of this city delivered an opinion in the case of Nathan T. Aikin vs. The State Board of Health, a portion of which is well worth reproduction.

The name of Aikin does not appear on the register of the physicians of the State, published under the auspices of the local and State Medical Societies. It would appear, however, that, having presented proofs to the Board of Health that he was possessed of a properly issued diploma in medicine, Aikin secured a license to practice, made out in regular form. Thereupon he proceeded to make known his special skill in various departments of medicine, by means of newspaper advertisements, which came finally to the notice of the Board. The plaintiff was thereupon notified by the Board of Health, that such advertisements would not be considered proper when put forward by their licenciates; and this remonstrance induced Aikin to submit to the Board a form of public notice or advertisement, which seems to have met with their approval. This the defendant proceeded to insert in the daily papers; but afterward, either emboldened by his success or stimulated by an urgent need of it, he proceeded to amplify this permitted advertisement till it became again obnoxious to the Board. Aikin was then given notice to appear before them and show cause why his license should not be revoked. He then proceeded by civil process to test the powers popularly supposed to be vested in the Board by the law which called it into existence. The action was in the form of a petition for an injunction from the court prohibiting the State Board of Health from depriving the plaintiff of his license to practice medicine. The

case was well argued on both sides; elicited a great deal of comment from many of the laity as well as the professional gentlemen of the city; and its decision is, as will be seen, decidedly in favor of the State authorities.

After reviewing the facts and the arguments, and quoting the clauses of the statute empowering the State Board to revoke certificates for cause, the learned judge said :—

The State Board was a corporation constituted expressly to have charge of medical practice and practitioners, and to exercise surveillance over the professional conduct of physicians, so as to exclude empirics and raise the standard of medical acquirements. Such a Board must of necessity be vested with large discretion. It ought to be so vested, and in the legitimate exercise of its discretion, ought not and could not be properly controlled by judicial tribunals. Its duties and position made it fit to judge of the professional conduct of physicians, and no power was given to any other body or officer to supervise it.

A physician might be guilty of unprofessional and dishonorable, and yet not of criminal conduct. It would have been a work of supererogation for the legislature to have given the State Board supervision over unprofessional conduct if that and criminal conduct had been synonomous. The term "unprofessional" was far wider than "criminal," and what was "unprofessional" conduct could only be determined by bringing the act to the professional criterion, and nobody could be better qualified to decide such questions than the State Board, five out of seven of whom were physicians themselves. "Unprofessional" conduct did not, therefore, necessarily involve criminal or immoral acts, but was such conduct as was inconsistent with the honorable practice of the profession, and, in judging of such conduct, the Board of Health had a wide discretion, which should not be interfered with by courts.

The general rule of law applicable to the point was, that equity would not interfere, by injunction, for the purpose of controlling the action of public officers, constituting inferior quasi-judicial tribunals on matters properly pertaining to their jurisdiction, nor would it review and correct errors in the proceedings of such officers, the proper remedy, if any, being at law, by writ of certiorari; and when they had exercised their decision, in good faith, and without any intention of oppressing or injuring private persons, an injunction would not be allowed against their action.

But, independent of the exercise of discretion, it appeared, as a matter of fact, that the advertisements of Aikin were unprofessional, for a large number of the most eminent physicians in the city had testified to that effect, and some had added that such advertisements were false.

Another objection by Aikin was, that the law creating the State Board was unconstitutional, depriving some physicians of their property without due process of law. It was, therefore, necessary to determine whether a license to practice a profession was a constitutional privilege or property. Any man was at liberty to choose his own profession, but he could only practice it on

the terms imposed by the law, and the law could impose such terms on any profession or employment as the legislature in its discretion deemed for the best interests of the community. The law had always sought to fill the learned professions with learned, upright, and honest men; and, though it had sometimes failed, the attempt was in the right direction, and for that purpose it had hedged law and medicine round with licenses. Men who had the property and lives of others especially intrusted to their keeping, ought to be men of skill and learning. More than that, it was of the utmost importance that all dishonor and dishonesty should be expelled from the learned professions, and the tendency of legislation had always been to effect that result. It had been expressly decided that the right to practice law was not a constitutional right, derived from the law of nature, but a mere creation of the statute, and a license only conferred a statutory right, subject to the control of the legislature. It was not property, nor even a contract between the legislature and attorney.

In no proper sense could the words "property" and "contract" be applied to the right to practice medicine. Such right was not descendible from its possessor to his heir, could not be bought or sold, and might be lost by misconduct or immorality on the part of the practitioner. It was not necessary, in order to constitute uniformity in the law, that it should bear equally upon all citizens of the State, but only that it should bear equally upon all who stood in the same relation to it, upon all who were under substantially the same facts. A physician who had practiced ten years would, by that practice, acquire a knowledge of local diseases and their treatment not to be attained by a stranger to the region, however extensive might be his reading. Every rule must to a certain extent, be arbitrary, and a Court would hesitate to declare a law unreasonable because it applied to some under one state of facts and not to others dissimilarly situated. And a Court would decline to set aside positive enactments of the legislature merely on the ground that in their opinion the law was unreasonable.

But, as the right to practice medicine was a mere statutory privilege, subject to be changed at any time by the legislature, and did not rise to the dignity of a contract or of property, there was no reason why such a privilege should not be denied to one man and extended to another in the discretion of the legislature. The objections to the law for want of uniformity, therefore, were not well taken.

The motion for injunction would accordingly be overruled.

Knowing the incompleteness and the actual legal deficiencies of the law under which the Board of Health was organized, we cannot fail to regard it as a matter for congratulation, that the courts have consented to construe its provisions, not by its letter which is defective, but by its spirit, which is calculated to awaken the sympathies of all professional men in good standing. Whether the Board of Health shall stand or fall, whether its powers be

curtailed or enlarged by a future legislature, we find abundant cause for congratulation that one of our eminent judges has laid down a valuable precedent in an opinion which reflects credit upon himself and the profession to which he belongs. It is an opinion written in that large and comprehensive view of the status of the professional man, which recognizes the fact that, while all men have inherent rights and privileges in the matter of barter and trade, the best interest of the community requires that law and medicine should be hedged about with such licenses, that only the learned and the upright shall be privileged by recognized membership. Surely the State Board of Health need not be reminded that this decision, justly in their favor, is due far more to the influence exerted by the general character of the professional men in the country upon the community at large, than upon any act or acts of theirs, as a corporate body. The decision is in general terms, upon professional conduct as viewed by "five physicians," out of the seven members of the Board.

For the Board itself, which may be said to be still on trial before the public and the profession, no verdict is found. The victory of the Board—and it is a victory—has been won rather by the honorable record of the mass of the profession, than by the five men referred to in the decision.

Very soon after its organization, we announced in these pages that we were unwilling to hamper the first steps of the Board by any adverse criticism. Though often tempted to comment in an unfavorable manner upon certain of their procedures, we have steadfastly refrained from uttering a word which would embarrass or cripple them in the performance of their duties. Nor shall we do so now. We wish for them the largest degree of usefulness which it is possble for them to achieve. We believe that, indeed, they can scarcely fail to do more in each succeeding year, than they have done in the past year of their labors. We believe also that the composition of the Board—its union of homœopathic, eclectic and regular practitioners—has been admitted to be no bar to the faithful execution of its task. But we have a stern duty to perform, as independent journalists, and from that duty we shall not shrink. We propose to point out the glaring inconsistency in the gross results accomplished by their action, which

has been fretting the conscience of the physicians of this city and State ever since January, 1878.

When Dr. Aikin went out of court, non-suited, he might have purchased a daily newspaper published in this city. That newspaper, a few months ago, was engaged in what the editors thought was a crusade against the medical schools of Chicago, on the ground that the latter should adopt a higher standard of education in science. And the editors of this sheet were at the same time receiving money from the publication of the flaming advertisements, the *ipsissima verba* of which we copy from the *Chicago Times*, and commend to Dr. Aikin's consideration :—

DR. JAMES, LOCK HOSPITAL, 204 WASHINGTON ST., COR. FRANKLIN, CHICAGO.—Chartered by the State of Illinois for the express purpose of giving immediate relief in all cases of private, chronic and urinary diseases in all their complicated forms. It is well known Dr. James has stood at the head of the profession for the past thirty years. Age and experience are all important. Seminal weakness, night losses by dreams, pimples on the face, lost manhood, can positively be cured. Ladies wanting the most delicate attention, call or write. Pleasant home for patients. A book for the million—Marriage Guide—which tells you all about these diseases who should marry, why not; 10 cents to pay postage. Dr. James has fifty rooms and parlors. You see no one but the Doctor. Office hours, 9 a.m. to 7 p.m.; Sunday, 10 to 12. Dr. James is 60 years of age. Stammering and stuttering cured, or no pay.

CURE YOURSELF.—French Specific Mixture, guaranteed to cure radically, diseases of certain secret and delicate nature in either sex or condition. Price $1. Full directions with each bottle. Sent by express. Sold only by E. L. Stahl, cor. Van Buren and Fifth ave., Chicago.

DR. A. G. OLIN'S PRIVATE HOSPITAL, 203 SOUTH CLARK ST., CHICAGO.—Everybody, from Atlantic to Pacific, has heard of Dr. Olin's skill in treating chronic and sexual diseases of men and women, spermatorrhœa, sexual debility, impotency, nervousness, seminal emissions, loss of memory from self-abuse or other causes, cured permanently. "Guide to Health," 64 pages, two 3-cent stamps—large work, choice information of special interest to both sexes, 50 cents. Reliable female pills and rubber goods at office. Special care, with board, for ladies during confinement.

DR. HENDERSON, 171 EAST MADISON STREET, CHICAGO, ILL. *A regular graduate in medicine. Over ten years' practice.*

Treats all forms of Chronic, Nervous, and Private Diseases, Spermatorrhœa, Sexual Debility, etc. Guarantees his best attention and treatment. Charges reasonable. Medicines furnished. Patients at a distance treated by letter. Consultation free and confidential—call or write. Illustrated BOOK and circulars sent sealed for two 3c stamps—free at office. 8 a. m. to 7 p. m. Sundays, 2 to 4.

NO CURE! NO PAY! DR. KEAN, No. 173 SOUTH CLARK STREET, CHICAGO, is still treating all Private, Nervous, Chronic and Special diseases, Spermatorrhœa, Impotency (sexual incapacity), Female diseases, etc. Consultation personally or by letter free. Green book, illustrated, 50 cents. Dr. Kean is the only physician in the city that warrants cure or no pay All languages spoken.

The authors of these advertisements are practicing medicine here in Chicago, in the manner set forth with great clearness by themselves. Some of them are said to be operating under assumed names, and to have had their "hospitals" and other institutions incorporated under the general law of incorporation of the State —the very source from which the State Board of Health acquires all its powers and emoluments. They may have become exempt by virtue of the clause which excludes all from the operation of the licensing law who have been practicing medicine in this State for more than ten years. And they may also be not exempt—who knows? The bare fact remains that, after almost one year of the existence of the State Board, these men, by the aid of the *Chicago Times*, are flinging the spume of the brothel and the filth of the sexually depraved, upon the breakfast tables of a large proportion of the news-reading public.

We know what may be said in answer to all this. Rome was not built in a day. The Board of Health cannot correct all evils at once, and do they not well if they correct a few? Even admitting all that may be said in regard to their limited powers, we cannot ignore these facts. There is a love of fair play and fair dealing inherent in the Anglo-Saxon, that cannot complacently contemplate the spectacle of the incautious youths in the city and the more experienced peripatetic peddlers of nostrums in the country, arrested in their career by the strong arm of the law, which yet is paralyzed in the presence of the hoary scoundrels, rooted in the heart of almost all our larger towns, strong mainly in the wealth accumulated in the very sewers of society, debauching the public morals in the public prints, and defying all the restraints imposed in the name of decency.

Till this great ulcer is healed or hidden from the public gaze, the professional men of this city cannot applaud with enthusiasm the operations by which the Board of Health may seek to remove an insignificant blemish upon the visage of the profession displayed to the public view.

Reviews and Book Notices.

HANDBOOK OF OPHTHALMOLOGY. By Prof. C. Schweigger, of the University of Berlin. Translated from the third German edition by Porter Farley, M. D., Rochester, N. Y. Philadelphia: J. B. Lippincott & Co. Chicago: Jansen, McClurg & Co.

We cannot imagine what has induced the translator to omit the author's preface. It is certainly contrary to all usage, and especially in this case we regard this omission a strange mistake — the only mistake, by the way, Dr. Farley can be accused of—because Schweigger's book differs from the usual plan and style of text-books so essentially, that the explanatory preface of the author is indispensable to an understanding of his intentions and his idea of a "handbook."

Schweigger has no great faith in mere book learning; he does not believe that a text-book can be substituted for didactic lectures and clinical demonstrations; he regards a handbook merely as the skeleton to which clinical teaching can and must give flesh and life. He, therefore, endeavored to make his book as concise as possible, and on this account omitted an introductory chapter on anatomy and physiology of the eye. With reference to this omission he says in the preface to the first German edition: "He who wishes to engage in the study of ophthalmology must possess the requisite knowledge of anatomy and physiology and optics, or he must be able occasionally to consult the text-books of these disciplines. Only where the discussion of certain questions required it, the field of the above named branches was entered upon." We fully indorse every word. These chapters on the anatomy and physiology usually found in

text-books, are too generally incomplete to be of much value, and only fill a number of pages which may be used to a better purpose. The omission of these chapters inaugurates a reform in the right direction; it places the ophthalmological text-books on the same standard with works on surgery or practical medicine, which do not contain the anatomy and physiology, but only discuss the diseases of the several parts of the human body.

In view of the fact that within seven years Schweigger's handbook has attained its fourth edition, it would seem almost preposterous to question if the English edition will meet with a similar success. It has many excellent features, not the least of which is the absence of all unnecessary phraseology. The style is very compact; the descriptions are condensed into the fewest possible words. But the desire for utmost conciseness is carried to an extreme; the author is often so brief, his writing so aphoristic that the reader must already have a great deal of knowledge in order to catch the meaning of the text. This is not the right style of a book for students, and we therefore fear it will not become a popular text-book in this country.

Besides it seems to us as if the work does not show that keen appreciation for the wants of students and practitioners, which is always a prominent feature of English text-books. A glance at the general composition will show the difference between these and the German work. Schweigger has divided his book into three parts of almost uniform length. The first part treats of the anomalies of refraction and accommodation, and of the ocular muscles; the second part contains the diseases of the orbit, lachrymal apparatus, eyelids, conjunctiva, and all affections of the eyeball, except those of the fundus; and in the third part the diseases of the fundus (choroid, retina, optic nerve, glaucoma and amblyopia) are discussed. The first part covers 188 pages; the second part, 210 pages, and the third part, 148 pages. Soelberg Wells allows to the same subjects 110, 383, and 112 pages respectively; Brundewell Carter, 85, 245 and 60 pages. These and other authors justly devote by far the larger space of their books to the consideration of those diseases which are common in the daily practice of a physician and on which he needs the most

information. Schweigger disregards these practical wants, and seems determined to make his three parts as uniform as possible, just as if he had written a drama under the old rule that the three acts should be about equal in length. In order to accomplish this aim he launches in the first part upon theoretical speculations which are just as learned as they are useless. For instance, he devotes ten pages to a discussion on the size of the ophthalmoscopic image. The mathematical formulæ in which these calculations abound, will make a student's hair stand on end. But *cui bono?* What practical results can be drawn from these calculations? None, whatever! The very foundation of the formulæ is hypothetical, and consequently the result must be liable to gross errors. The calculations are based upon the assumption of an uniform size of the optic disc, and upon the optical relations of the Listing-Donders' schematic eye. But the optic disc is not of an invariable size; it shows individual variations. And the schematic eye does not accurately represent the dioptric apparatus of the innumerable individual variations of the human eye. But granted the ophthalmoscopic image to be enlarged from fifteen to twenty times; does it so appear to the observer? If we let a dozen students make an accurate drawing of the same optic disc as it appears to each of them, we shall observe the strange fact that no two students will represent the same size of the optic disc. And we only need to compare the ophthalmoscopic pictures of a Stellwag, a Jaeger, a Liebreich and others in order to be fully convinced of the fact that the enlargement in which the fundus appears to each observer, depends as much on his individual faculty of projection as on the magnifying power of the dioptric media. Jaeger, for instance, is known for the scrupulous accuracy and enduring pains with which he delineated the pictures of his ophthalmoscopic atlas; yet all his figures appear as if magnified seven times only! And to us at least the optic disc always appears larger than Jaeger's figures.

If we finally mention that Schweigger himself admits that no practical conclusions can be drawn from these calculations, we hope the reader will agree with us that such useless theoretical speculations do not enhance the practical usefulness of a book.

Still this is a very slight blemish as compared with the sometimes very unsatisfactory way with which practically important subjects are disposed of in the second part of the book. To repeatedly advocate the use of lead lotions without a word of caution as to the damage which may possibly be done to the cornea by staining; the dismissal of so important a disease as iritis on a few pages; and to say not one single word about the division of the cataract operation into the preliminary irridectomy and the extraction (which plan has been adopted by many surgeons as the safer procedure), these are only a few instances of the deficiencies which we believe seriously effect the practical value of the book.

The translation and publishing work is done with great skill and praiseworthy care. We have discovered only one error worth mentioning (which by the way is not found in the original): on the last line of page 41 it should read 12 inches for 4.

F. C. H.

TRANSACTIONS OF THE AMERICAN GYNÆCOLOGICAL SOCIETY. Volume II, for the year 1877. Boston: Houghton, Osgood & Co.; Chicago: Jansen, McClurg & Co.

This most elegant and attractive work has but lately reached us, after many months of expectation; so long, in fact, had the reviewer waited for its appearance, that he had determined to shut his eyes to its external beauty, enter the book boldly, and slay a few of its contributors at all hazards. Now that it is here, it disarms adverse criticisms by its real excellence.

To begin with, there is the address of the retiring President, Fordyce Barker, in which he holds up the finger of warning to the over-bold modern uterine surgeon, and deals out to the members much advice in his usual dignified manner. Space not permitting, we can only pick out and mention some of the most prominent among the many original papers which follow.

First among these comes a paper on "The Functions of the Anal Sphincters," by James R. Chadwick, the secretary of the society, in which one only needs to read of the numerous experiments of the author to recognize the conscientiousness of his search after facts.

By special request from the society, John C. Dalton, of New York, presented a "Report on the Corpus Luteum," with twelve chromo-lithographic plates of extreme beauty, which gives us a pretty good idea of our present knowledge of these bodies, and makes permanent the idea of them that could only be outlined in the descriptive part of the report.

Following this is an essay on the "Pathology and Treatment of Puerperal Eclampsia," by Professor Otto Spiegelberg, of Breslau, Prussia, and another on "Dilatation of the Cervix Uteri for the Arrest of Uterine Hemorrhage," which is simply the reiteration of a fact long known and established, and cannot be styled original.

Of no small value is the warning of William T. Lusk, of New York, "On the Necessity of Caution in the Use of Chloroform During Labor." There can be no doubt that many cases are placed on record as death from syncope, or hæmorrhage, or heart disease, or pulmonary thrombus, etc., that, if clearly sifted, could be traced directly to the employment of chloroform. Dr. Lusk, after a candid recital of several unfortunate cases that came under his direct observation, sums up his experience as follows:

1. Deep anæsthesia carried to the point of complete abolition of consciousness, in some cases weakens uterine action, and sometimes suspends it altogether.

2. Chloroform, even when given in the usual obstetrical fashion, namely, in small doses during the pains only, and after the commencement of the second stage, may, in exceptional cases, so far weaken uterine action as to create the necessity for resorting to ergot or forceps.

3. Patients in labor do not enjoy absolute immunity from the pernicious effects of chloroform.

4. Chloroform should not be given in the third stage of labor. The relative safety of chloroform in parturition ceases with the birth of the child.

5. The remote influence of large doses of chloroform during labor, upon the puerperal state, is a subject that calls for further investigation and inquiry.

Following this comes what was evidently the prominent discussion of the meeting, suggested by a paper from Ely Faw-de-

Warker, of Syracuse, "The Present Status of the Intra-Uterine Stem in the Treatment of Flexion of the Uterus," in which the doctor makes an able and carefully-worded plea for what is evidently with him a favorite mode of treatment for uterine displacements. His views, as expressed in that paper, gave rise to a very warm discussion, in which almost every member joined, it being quite evident that the author had touched a very sensitive spot in the recollection of most of those present.

Dr. Battey, of Rome, Ga., next propounds the query: "Is there a Proper Field for Battey's Operation?" in which he so ably and logically sustained the affirmative, that he received quite an ovation of praise from all who joined in the discussion following the reading of his paper.

Probably the effort entailing the most time, trouble and careful consideration was that of Dr. Paul F. Mundé, of New York, on "The Value of Electrolysis in the Treatment of Ovarian Tumors." It occupies eighty-nine pages of the book, and contains much valuable information, the result of many months of continuous labor on the part of the author. We notice in this paper a discussion on a doubtful case of ovariotomy between two Chicago surgeons. This part of the book ends with a treatise on the "Hystero-Neuroses," "with special reference to the menstrual hystero-neurosis of the stomach," by George J. Engelman, of St. Louis, most carefully and elegantly written.

The second portion of the "Transactions" is devoted to the publication of papers presented to the Council by the candidates elected to fellowship. These seem to be all relating to subjects of practical importance, and the mention of their titles will suffice to give the reader a very fair idea of their nature; 1st, "Cases Illustrating Important Points Connected with Ovariotomy," by Gilman Kimball, of Lowell, Mass. 2d, "The Radical Treatment of Dysmenorrhea and Sterility by Rapid Dilatation of the Canal of the Neck of the Uterus," by Ellwood Wilson, of Philadelphia. 3d, "Dr. Uredale West's Views of Rotation," by John P. Reynolds, of Boston. 4th, "Vascular Tumors of the Female Urethra, with the Description of a Speculum Devised to Facilitate their Removal," by A. Reeves Jackson, of Chicago. 5th, "The Simple Varieties of Perineal Lacer-

ations; Their Prevalence, Consequences, and the Importance of Radical Treatment," by Thaddeus Reamy, of Cincinnati, in which the author rather startles us by the recital of the terrible consequences following any ununited rupture of the perineum, no matter how slight, and rather disturbs our conscience when we reflect on our guilt in not always doing as the doctor does, always restoring the perineum completely, even taking in a little more, when practicable, as he sometimes does. 6th, "Lying-in Institutions; Especially Those of New York," by Henry J. Garrigues, of Brooklyn; and 7th, "The Menstrual Cycle," by John Goodman, Louisville.

The paper on lying-in institutions is particularly interesting reading, and might prove of particular interest to the medical board of our County Hospital, who are at present countenancing the fitting up of a garret in a large general hospital for lying-in purposes.

The last pages of these "Transactions" are occupied by an index of gynæcological and obstetric literature of all countries, alone worth almost the price of the book. If any society of this kind has yet published a volume of transactions equal to this we have certainly never seen it.

THE PHYSICIAN'S VISITING LIST FOR 1879. Twenty-eighth year of its publication. Philadelphia: Lindsay & Blakiston.

As the first memento of the approaching new year, this little book has come to us. It is such a dear and true friend of every physician that our readers will undoubtedly be pleased to learn of its arrival. It looks as well as ever in a new coat and with all the old good qualities which have made it the pet of the profession.

ANATOMY, DESCRIPTIVE AND SURGICAL. By Henry Gray, F. R. S., etc. A new American edition, from the eighth and enlarged English edition. To which is added Landmarks, Medical and Surgical, by Luther Holden, F. R. C. S. Philadelphia: Lindsay & Blakiston; Chicago: Jansen, McClurg & Co.

It would be superfluous to say more than to announce the appearance of a new edition of this excellent work, which for

twenty years has been the most popular text-book of anatomy in the English language. The editors have carefully retained all the good features of the old editions and have made all the changes in the section of microscopical anatomy necessary to keep the standard of the book abreast with the advancement of microscopy. The addition of Holden's Landmarks will only enhance the practical value of the book.

HOW TO BE PLUMP: OR TALKS ON PHYSIOLOGICAL FEEDING. By T. C. Duncan, M. D., etc., etc. Chicago: Duncan Brothers, 1878. 12 mo. pp. 60.

This little volume is a remarkable production. It goes forth as a tract to the people and the doctors, ostensibly to instruct the lean how to be plump.

Plain directions are given for the accomplishment of this purpose, in a most inexpensive manner. Thin down your diet to slops; eat soup freely, and drink regularly of water between meals—this is the way. Could anything be simpler?

But the book is clearly written for a double purpose. The object referred to above, is the one that will present itself to the understanding of the general reader; the other is more recondite, and will hardly be fully appreciated by any but members of the profession. This purpose—the one that will send this literary marvel down to history—is one of humor, of burlesque; and the victims the author's darts are aimed at, are the fathers of our physiology.

Much of the matter is quoted from standard works on physiology, and does not call for comment. It is only when we come to the original part of the work that we see the acuteness of the author's satire. From the latter we make a few quotations.

Regarding acid condiments, he says: "Acids of all kinds quicken the circulation, unduly excite the system, while they at the same time tend to break down the cells."

Referring to the relative composition of the blood in the different temperaments, we are told that "Lack of water produces a preponderance of red corpuscles in the sanguine."

Again, "Water is formed in small quantities in the body!!!"

"Many a case of spinal irritation and nervous exhaustion, are

due (sic) to a lack of qantity and quality of the blood current, of which 80 per cent. is water."

A glass of water taken after a meal, forces "the food farther down the alimentary tract"—the digestive apparatus seeming to be regarded as an inelastic tube, and ingestion like the stuffing of sausages.

"Fat is found in nearly all parts of the body; it aids digestion and assimilation, quickens the circulation, and hastens cell activity."

"The importance of fat are (sic) physical, mental, and moral."

"In the lean, the functions are performed with difficulty; the digestion is feebly performed; friction is manifest everywhere, and there is often explosions (sic) of the nervous system, i.e., spasm, neuralgia, or bursts of passion."

"In two weeks it"—i.e., the baby—"ate the whole time." What an appetite!

"Starchy food taken in excess, taxes the liver till it becomes enormous in size from the deposit of fat therein. If persevered in, respiration is impeded, and there is great danger of suffocation." Here is a hint to the true solution of the Chinese question—feed John upon starch to suffocation.

"Too much water should be avoided, as it sends the blood too rapidly into the capillaries, and some of the serum transudes in the form of perspiration."

Before retiring for the night, a half glass of water should be taken, as it "insures quiet and refreshing sleep."

Truly the gift of this author is a rare one.

N. B.

BOOKS AND PAMPHLETS RECEIVED.

A Treatise on the Science and Practice of Midwifery. By W. S. Playfair, M. D., F. R. C. P., etc., etc., with Notes and Additions by Robert P. Harris, M. D. Second American edition, from the second and revised London edition, with two plates and one hundred and eighty-two illustrations. Leather, pp. 638. 1878. Phil.: H. C. Lea. Chicago: Jansen, McClurg & Co.

The Antagonism of Therapeutic Agents: and what it Teaches. The Essay to which was awarded the Fothergillian gold medal of the Medical Society of London, for 1878. By T. J. Milner Fothergill, M. D., Edin. Cl. pp. 156. Phil.: H. C. Lea. Chicago: Jansen, McClurg & Co.

The Throat and its Diseases. With One Hundred Typical Illustrations in colors, and Fifty Wood Engravings, designed and executed by the author, Lenox Browne, F. R. C. S. Cloth, pp. 25. Philadelphia, H. C. Lea. Chicago: Jansen, McClurg & Co.

A Treatise on the Diseases of the Ear, including the Anatomy of the Organ. By D. B. St. John Roosa, M. A., M. D. Fourth Edition. Illustrated by wood engravings and chromo-lithographs. Cloth, pp. 569. New York: Wood & Co. Chicago: Jansen, McClurg & Co.

Cyclopedia of the practice of Medicine. Edited by Dr. H. VonZiemssen. Vol. VIII. Diseases of the Chylopoetic System, with Chapters relating to Disease of the Bladder and Urethra and Functional Affections of the Male Genital Organs. Editor of American Edition, Albert H. Buck, New York. Cloth, pp. 935. 1878. New York: Wm. Wood & Co. Chicago: W. T. Keener, 65 Washington street.

Sore Throat, its Nature, Varieties and Treatment; Including the Connection between the Affections of the Throat and other Diseases. By Rosser James, M. D., M. R. C. P. Third edition, with hand colored plates. Cloth, pp. 288. 1878. Philadelphia: Lindsay & Blakiston. Chicago: Jansen, McClurg & Co.

A Monograph on the Treatment of Diphtheria, Based upon a New Etiology and Pathology. By Wm. C. Reiter, A. M., M. D. Cloth, pp. 47. 1878. Philadelphia: J. B. Lippincott & Co. Chicago: Jansen, McClurg & Co.

The Cell Doctrine, its History and Present State; for the use of Students in Medicine and Dentistry. Also a Copious Bibliograph on the Subject. By James Tyson, M. D. Second edition, revised and enlarged. Illustrated. Cloth, pp. 202. 1878. Philadelphia: Lindsay & Blakiston. Chicago: Janson, McClurg & Co.

A Guide to the Practical Examination of Urine, for the use of Physicians and Students. By James Tyson, M. D. Second edition, revised and improved, with illustrations. Cloth, pp. 172. 1878. Philadelphia: Lindsay & Blakiston. Chicago: Jansen, McClurg & Co.

Varicocele; Inaugural Dissertation zur Erlangung der Doctor Würde in der Medicin, Chirurgie und Geburtshilfe. Von Nicholaus Senn, aus Milwaukee, Wisconsin.

Placentarreste nach Zeitgeburten. Inaugural Disrertation zur Erlangung der Doctor Würde, in der Medicin, Chirurgie und Geburtshilfe. Von Alois Graettinger, aus Milwaukee, Wis.

Thirty-Fifth Annual Report of the Managers of the State Lunatic Asylum, Utica, N. Y., for the year 1877.

The Fifty-Fourth Annual Report of the Officers of the Retreat for the Insane at Hartford, Connecticut. April, 1878.

Fifteenth Annual Report of the New York Society for the Relief of the Ruptured and Crippled. May, 1878.

Upon the Treatment of Strumous Diseases by what we may call the Solfatara Method. By H. R. Storer, M. D. Reprint from the Boston Medical and Surgical Journal. June 27, 1878.

Strictures of the Cervical Canal. By Fred. Ekland, M. D. Translated from the Swedish, by A. Sibley Campbell, A. B., M. D., Augusta, Georgia.

Operations of Closure of Cleft Palate. By A. Vanderveer, M. D. One of the Series of American Clinical Lectures. Edited by E. C. Seguin.

Report of Public Hygiene in Indiana. By Thad. M. Stevens, M. D., Indianapolis.

Restriction and Prevention of Diphtheria. Document issued by the State Board of Health of Michigan.

On the use of the Solid Rubber Bandage in the Treatment of Eczema and Ulcers of the Leg. By L. Duncan Bulkley, A. M., M. D. Reprint from the Archives of Dermatology. July, 1878.

On Diet and Hygiene in Diseases of the Skin. By L. Duncan Bulkley, A. M., M. D. Reprint from Virg. Med. Monthly.

Elettromopatia. By Conte Cesare Matthei.

Emiplegia, Faringo-Laringea Destra. By Giovanni Loughi.

La Scienza Nuova del Conte Cesare Matthei et la Scienza Vecchia del Dottore C.

MEDICAL QUACKS IN BAVARIA.—Since 1873, an official census is taken in Bavaria every year, of all persons who are practicing medicine or surgery without having passed the examination. These people are allowed to practice under certain restrictions which do not seem to discourage them at all, for the regular physicians begin to get alarmed by the rapid increase of quackery. In a recent number of the *Ærztliche Intelligenz-Blatt* the statistics are given for the past four years, which show that the number of quacks in Bavaria has increased from 1,156 in 1874 to 1,563 in 1877. The quacks are of all kinds; but, prominent among them are the barbers, midwives, druggists, and ministers of the Gospel.

Summary.

Collaborators:

DR. H. GRADLE, DR. L. W. CASE, DR. R. PARK,
DR. R. TILLEY, DR. D. R. BROWER.

PHYSIOLOGY.

THE PHYSIOLOGY OF LABYRINTHINE VERTIGO. (*The Doctor*, Sept. 1, 1878.)

Some recent papers by Dr. Woakes have been thus summarized by Dr. Orne Green, for the *Boston Med. Jour.* The tympanum is supplied with arterial blood from the carotid, and its veins discharge into the jugular. The labyrinth is supplied by the vertebral, and its veins discharge into the superior petrosal sinus. The vertebral artery derives many of its vaso-motor nerves from the inferior cervical ganglion, and these nerves communicate with the brachial plexus. The same ganglion furnishes the inferior cardiac nerve, the principal inhibitory nerve of the heart. Besides these connections a fasciculus is given off from the pneumogastric, near the recurrent laryngeal, to the lower cervical ganglion. So that we have in this ganglion an organ connecting the upper extremities, heart and upper portion of the digestive tract with the labyrinthine circulation. From any irritation we may have a diminished inhibition which shall relax the walls of the vertebral artery and cause pressure on the endolymph, i. e. vertigo. Hence such vertigo does not necessarily imply previous disease of the ear.

Weir Mitchell has noticed that gunshot wounds of the upper extremities are often followed by dizziness.

Quinine in large doses and tobacco diminish vascular tonus; while bromine, the bromides and especially hydrobromic acid stimulate vascular innervation. Hence the antagonistic effect of the latter on the tinnitus caused by the former.

Practical Medicine.

On some forms of Chronic Catarrh of the Stomach. —Wm. B. Neftel. Part II. (*Medical Record*, Sept. 28, 1878.)

In their dietetic management a variety of wholesome food is required; including both farinaceous substances and animal food —especially meat, beef tea and soups. But beef tea, soups and meat juice contain only the aqueous extract of meat and leave earthy phosphates and albumen in the residuum and cannot entirely replace meat in substance.

Meat should not be allowed raw or underdone, from the danger of animal parasites. For the same reason drinking of fresh blood should be condemned.

Meat should be well and palatably prepared, not greasy nor burnt.

Poultry and game (well cooked) are generally allowed, although goose, duck, etc., are difficult to digest, and have to be used with discretion.

Next to meat, fish is very digestible and nourishing, but must be well cooked. That it does supply more phosphorus to the system than meat, milk, eggs, bread, etc., is an exaggeration.

Fresh milk (with alkaline reaction) is a most excellent article of diet for dyspeptics. Cream cannot be a substitute for milk, and is rather injurious to dyspeptics.

Eggs are the most nutritious dietetic article, and may be cooked hard or soft, though when not perfectly fresh they should be cooked thoroughly.

Bread is the representative of the nutritive vegetable substances. For dyspeptics it ought to contain no admixture of fat, milk, sugar, molasses, etc., but be made very light, simply with water, salt, and good yeast, and well baked. The crust of well baked bread increases its digestible properties.

Peas, beans and other leguminosa are very nutritious, but in cooking them for dyspeptics their capsules should be eliminated as they cause flatulence.

Potatoes have less nutritive value, though rich in starch, potassium and phosphoric acid, yet contain 70 to 80 per cent. of water. Dyspeptics must forego eating too many potatoes.

Arrowroot, sago, tapioca, are identical with the starch of potatoes, and can be used with benefit.

Fresh fruits contain over 70 per cent. of water, and do not belong to a nourishing diet—but are reckoned among the *refreshing* dietetic substances. Lemon juice contains a large amount of potassic salts. In chronic gastric catarrh, however, fresh fruits are not well digested.

Vegetables (such as beets, cabbage, lettuce, etc.,) are not easily digested by dyspeptics, and may cause pain; they should be avoided.

Tea and coffee and even chocolate, if it agrees, may be allowed. Although often prohibited, they are very wholesome and useful beverages. "They all contain the same active principle, a *nitrogenous* organic basis—thein, caffein theobromin, which are chemically and physiologically identical, and which act upon the system in the same way as the extractive substance of meat."

"The infusion of tea contains, besides, a considerable amount of the salts of iron and manganese. Their ash is similar to that of the blood. These beverages stimulate in a moderate degree the muscular and nervous systems, improve the circulation, and thus increase our physical and mental productivity."

If indulged in to excess, they diminish the appetite for that amount of food necessary for the healthy condition of the system.

Convalescents from chronic gastric catarrh, often inquire if they should restrain their appetite after complete recovery. The doctor thinks of the two evils—too much or too little food—the latter is the most objectionable, as it leads to a deficiency in the nutrition of some organ or of the whole system.

ANTISEPTIC INHALATION IN PHTHISIS. Eade. (*L'Union Médicale*, September 5, 1878, page 364.)

The author has recourse to carbolic acid vapors to diminish the muco-purulent secretion, and to lessen the cough and debility in-

cident thereto in consumptives. Pour into a narrow-necked jug or pitcher, 250 grams of moderately warm water, and add 60 centigrams of carbolic acid. Shake and let the patient inhale the vapors for ten minutes. This may be done three to five times in the twenty-four hours, during the night if necessary. It is also useful in bronchitis to facilitate expectoration.

ADVANTAGES OF A SINGLE PUNCTURE OF EACH ARM IN THE VACCINATION OF VERY YOUNG CHILDREN.—(*Dr. Hugues, Gazette Obstétricale from Nice Médicale, Sept.* 5, 1878, *page* 259.

The author establishes the two following conclusions:

1st. Contrary to the general opinion, it must not be believed that variola being rare in the first two or three months of life, it is not necessary to vaccinate at this age. He has observed several cases of small-pox in children less than three months old, which he had refused to vaccinate. He therefore vaccinates any child now at the slightest wish of the parents. But having formerly made three punctures in each arm, and seen several grave accidents due to extent or intensity of inflammation, he was led to inquire if a single puncture would not be sufficient.

2d. It is entirely sufficient to make but a single puncture in each arm in very young children. In eleven children re-vaccinated at later periods, and even with three punctures, not one was susceptible to the influence of the virus.

SURGERY.

REUNITING A SEVERED SCIATIC NERVE.

In his address before the Surgical Section of the British Med. Association, Mr. Wheelhouse, of Leeds, related the case of a man who had fallen upon a scythe, and completely divided the sciatic nerve, the injury leading to paralysis of the limb, which resisted all treatment. An attempt was made to re-unite the ends by exposing them by careful dissection, and paring them obliquely, until apparently fresh nerve tissue was exposed. They

were then brought together, and stitched with fine carbolized catgut thread. The leg had to be firmly flexed upon the thigh, in order to make up the shrinkage in the nerve length, and the ankle was firmly lashed to the buttock to retain it in this position.

Gradually sensation returned. At the end of five weeks he relaxed the position of the leg, letting it down inch by inch, till it was straight again. Slowly the power of voluntary motion also returned, and three months after his admission to hospital, he was discharged able to walk with the aid of two canes. Improvement continued, and eventually he was able to work and move about as he was wont to do.

MYOSITIS OSSIFICANS.—(*Med. Press and Circular*, August 21, 1878.)

At a recent meeting of the Vienna Medical Society, Dr. Nicoladoni presented a girl, seven years old, as an example of that very rare affection of the muscles, *ossification*. The disease had been going on about a year, commencing in the muscles of the neck, whence it extended to the spine, the anterior part of the thorax and the limbs.

On each side of the spine a rigid line (sacro-spinalis) extends. The scapula is fixed to the thorax; and in the cervical regions are found fibrous cords containing bony plates. The right knee-joint is contracted, and the pectorales are almost entirely ossified. There are but few similar cases on record.

OBSTETRICS.

OBLITERATION OF THE UTERINE NECK IN A PREGNANT WOMAN. (*Journ. de Méd.* from *Annales de la Société Medico-Chirugicale de Liège.*)

M. Piron publishes an interesting case of a woman who had granular metritis after a first pregnancy. The local treatment consisted in cauterizations with solid silver nitrate, astringent injections, and applications of iodide of potassium in glycerine by means of a sponge, according to Scanzoni's method. It was during this treatment that the woman became pregnant a second

time. The first stages of this pregnancy passed unnoticed on account of absence of sympathetic phenomena, and it was only after the belly began to grow that the fact was discovered, and the cauterizations were not discontinued until the sixth month. This circumstance of pregnancy developing in spite of the disease affecting the womb, and especially in spite of the means employed to combat it, gave rise to the fear that the inflammation of the neck, joined to the congestion produced by the pregnancy, might lead to obliteration of the neck. This indeed occurred. Some days before the abortion the touch proved the complete absence of the neck and uterine orifice. The speculum even did not permit the distinguishing of the slightest orifice, only a sort of furrow where it had formerly existed. A probe passed into this furrow could not penetrate to the uterine cavity. A few days after labor began the position could readily be made out through the thin wall of the womb, but no orifice was produced. M. Piron tried in vain to pass his nail through the groove he had seen. He decided to perform vaginal hysterotomy, and, by the aid of a speculum, he opened, with a bistoury, the uterus at the place of the neck, cutting from left to right. It was repeated in one hour, the first not being sufficient; but little blood was lost; the labor progressed slowly. After the neck was sufficiently dilated, the membranes were ruptured and forceps applied, a living child being extracted. The patient did well, and the neck remained permeable several months after the operation.

THERAPEUTICS.

THERAPEUTIC EMPLOYMENT OF THE SALTS OF CONIA. *Journ. de Médecine*, Sept., 1878, page 417.

Hemlock, of which the alkaloid is conine or cicutine, has long been employed in cancer, scrofula, syphilis and pulmonary or laryngeal affections, accompanied by spasmodic phenomena. Up to the present time this alkaloid has been regarded as exceedingly poisonous, and only given in very small doses. M. Tyryakian has just shown, in a thesis which is an extremely complete physiological and clinical study of conine and its salts, that this sub-

stance is much less poisonous than supposed, and moreover that it produces all the effects of hemlock. Very numerous experiments on animals, which have made clear its action, have been conducted in the laboratory of M. Vulpian. The clinical researches have been made principally in the service of M. Audhoui, who for a long time has been occupied with the properties of the bromhydrate of conia, the salt which presents the most advantages, and has found that below 10 centigrams the medicine does not act; he has further seen that tolerance of the medicine is produced rapidly, which requires a rapid increase of dose, and that elimination taking place very rapidly by the kidneys, it was necessary to give it in large doses. When a rapid action is required, hypodermic injections are best, and a remarkable thing is that although conine has a local effect which renders its injection very injurious, the bromhydrate, on the contrary, causes no accident at the point of puncture. A solution of 1 gram of crystallized bromhydrate of conine in 19 grams of distilled water is used, each gram containing 5 centigrams of the salt. The initial dose for injections does not differ much from what is necessary by the stomach, so that one may begin without inconvenience by a dose of 15 centigrams at once. But if the patient appear too susceptible, or too weak, but 10 or even 5 centigrams should be used. The injections must be often renewed, and the dose rapidly increased to keep the patient under the influence of the medicine.

By the stomach the increase of dose is very easy, and one may readily give very large doses, 50 or 60 centigrams and even more in three or four doses, always taking care to habituate the system by smaller doses. Limit in the progression of doses cannot be assigned; the condition of the patient, the effect desired, and other considerations of this order can alone guide the physician. In one case the dose was raised to 1 gram in twenty-four hours, and in four doses, without any evil results. Both pills and syrup were used. The following are some of the formulas employed by M. Tyryakian: Bromhydrate of conine, 1 gram; sugar of milk, 1 gram; mucilage, q. s. To be made into twenty or forty pills, each containing 5 or $2\frac{1}{2}$ centigrams. A syrup may be made with 1 gram of the bromhydrate of conine, and 250

grams of simple or aromatic syrup, a teaspoonful containing 2 centigrams of the salt. For infants, only 25 centigrams of the salt should be used, a teaspoonful then containing 5 milligrams.

For external use 2 grams of the salt in 40 grams of cucumber ointment. It may be combined with bromide of potassium as in the following: Bromide of potassium, 10 grams; bromhydrate of conine, 1 gram; distilled water, 400 grams. Each spoonful of 20 grams containing 50 centigrams of bromide of potassium, 5 centigrams of bromhydrate of conine. In children, experimented upon, the dose did not exceed 2 centigrams of bromhydrate of conine.

TAYUYA.—(*Virg. Med. Month., July*, '78.)

This drug, to which attention was drawn in a card published in the May number of this journal by Dr. Hyde, is the root of a cucurbitaceous Brazilian plant, the *dermophylla pendulina.* Its physiological action is said to be an increase of saliva and of gastric juice, improved appetite and digestion and slight laxation, in small doses; in large doses it causes vomiting, colic, purging, sweating and salivation.

It is a proprietary preparation and two tinctures are prepared by the Italian pharmacists,—"*tra madre*" and "*tra deluta.*" The former is used hypodermically in gram doses; and locally diluted with water. The weaker tincture is made with one part of the former to three parts of rectified spirit, and is given internally in doses two to twenty drops two or three times a day.

The value of the remedy in syphilis is still *sub judice.*

OXIDE OF ZINC IN DIARRHŒA.—(*Bul. de Thérap.*)

Bouany claims that every case of chronic diarrhœa treated with zincic oxide and sodic bicarbonate, results favorably. Moreover, while cases treated in the ordinary way are liable to recur, those handled according to this plan never return.

LIME WATER AND MILK COMPATIBLE WITH CALOMEL.—(*Virg. Med. Month.*, July, 1878.)

At a June meeting of the Richmond Acad. of Med., Dr. Joynes called attention to the above subject, and to his experi-

ments as to whether we could employ these two remedies together without the formation of *black wash* in the stomach. Dr. Chapman had long ago stated that the emulsion of lime-water and milk, was not disturbed by citric or hydrochloric acids, nor was a black precipitate thrown down by calomel. Dr. J. found that if a sixth of lime-water is added to milk, as advised by Dr. C., and calomel agitated with the mixture, no apparent decomposition occurs, even after several hours; nor is any such effect noticed when the proportions are as one to two. But when mixed in equal parts, the reduction to the black oxide is very evident, and quickly takes place. We need not hesitate, therefore, to give moderate quantities of lime-water in milk to patients with bowel complaints, or other affections for which we are administering calomel.

CHOLAGOGUES.—(*Lancet.*)

At a meeting of the Edinburgh Medico-Chirurgical Society, June 19th, Professor Rutherford detailed some experiments on the biliary secretion and the action of cholagogues. The subjects of experiment (dogs) were curarized, and the drugs injected into the duodenum. Physostigma is a powerful stimulant of the secretory action, its effect being neutralized by atropia; the latter by itself having no influence. Phytolacein, nitric acid, sodic benzoate, ammonic benzoate, ammonic phosphate, and sodic salicylate, act like the calabar bean, simply on the liver. Menispermin and veratrium act only on the intestinal glands. Gamboge stimulates the whole intestinal tract. Baptisin stimulates both liver and the intestinal glandular system. Tannin and potassic iodide have no effect, and plumbic acetate checks the hepatic secretion.

The true cholagogues, as mentioned above, act by stimulating the hepatic cells or their nerves. A purgative agent which only stimulates the intestinal tract, diminishes the secretion of bile by draining the portal vein.

ON SOLUTION OF IODINE IN OIL OF BITTER ALMONDS.—Blackwell. (*Phil. Med. Times August* 31, '78.) If iodine be allowed to stand in oil of bitter almonds, in proportion of one to

three, for two or three months they will unite. This solution mixes freely with oils, fats, glycerine, alcohol, ethers and fluid extracts. This might be used with soap liniment for local sorbefacient use, with croton oil for counter-irritation, or with glycerine for general local use, the latter mixture leaving the skin without stain. For internal use one part of the above oil with seven parts of glycerine makes an elegant mixture, of which the dose is two drops (= $\frac{1}{20}$ gr). One part of this with 6,000 parts water has about the strength of the Saratoga Iodine spring. But the iodized oil is especially suited for admixture with cod liver oil; if to 500.0 of the latter be added 2.0 of iodized oil, 8.0 of phosphorated oil, (v. s. d.) and 0.6 of bromine a very efficient combination will be secured. The oil of bitter almonds has, in such proportions, no other than a happy effect.

Antidote for Carbolic Acid Poisoning.—(*Louisville Med. News.*)

Professor Bauman has recommended, and Dr. Senftleben has used, dilute sulphuric acid as antidote to carbolic acid, and with success; the phenol and the acid combining to form phenyl-sulphuric acid, which is not poisonous. His formula was:

Acid. sulph. dil.	10
Mucilag. acaciæ	200
Syrup. simp.	20

Dose:—A tablespoonful every hour.

Propylamine in Chorea Minor.—(*Ærtz. Intelligenzblatt.; sum. in Phil. Med. Times.*)

Pürckhauer gave propylamine in daily doses of 1.0 to 1.25. (℞ Propylamine 1.0; aq. dest. 120.0; sp. menth. pip. 25.0. Sig. tablespoonful every hour) to six persons suffering from chorea. The disease was overcome in three or four days, even where it had existed weeks. The remedy has not been used long enough to show whether such results are to be looked for in cases of rheumatic origin only.

Items.

THE following circular letter has been issued by the Surgeon General of the United States Marine Hospital Service:

To Physicians and others residing in the cities and towns visited by the yellow fever:

Acting upon the advice of members of the American Public Health Association, the Surgeon General of the Marine Hospital Service has organized a commission to gather and record all important *facts* relating to the commencement and spread of the present epidemic of yellow fever, with the view of establishing truths upon which the theory and practice of prevention of future epidemics may rest.

The gentlemen composing the commission—Prof Bemiss, of New Orleans, Dr. Cochran, of Mobile, and Prof. Howard, of Baltimore,—have already commenced their work in New Orleans, and will visit the principal places in which the yellow fever has prevailed.

The cordial co-operation of all who have facts to communicate bearing upon the subject under investigation is earnestly solicited for the commission.

A preliminary report of the facts, gathered up to the 19th day of November next, will be presented to the American Public Health Association, which will convene on that day in the city of Richmond, to discuss the report, and to advise the best course to be pursued in concluding the labors of the commission.

It is not intended to terminate the investigation on the 19th of November, but it is desirable that those interested in public hygiene, in all parts of our country, should meet in council prior to the assembling of Congress, as it is generally believed that leg-

islative action will be promptly taken in reference to preventing future epidemics. The agitation of the public mind upon this important subject is proper and commendable, but herein lies the peril of hasty or not fully matured legislation, and it is hoped that by the action proposed, Congress may have the benefit of the advice of the representative men of sanitary science.

The invitation of the officers and executive committee of the American Public Health Association, extended for the Richmond meeting, is to "medical and sanitary authorities and other citizens who seek to promote the public health." This will afford an opportunity for all who desire to advise in reference to the work in hand.

If the voluntary contributions of money for the expenses of the commission are sufficient, it is intended to add to the commission a sanitary engineer, a microscopist and a meteorologist.

The first step in the investigation is, as already stated, an examination into the causes of the commencement and spread of the epidemic, now being prosecuted by the commission.

The second step is the study of the natural history of the disease itself, which will be undertaken if the contributions of money warrant.

It is believed that the study of the treatment of the disease should not be added to the labors of the commission. The contributions of experience in this direction will doubtless be numerous, and may be properly left to the medical journals of the country, and to individual reports.

Very respectfully,

JNO. M. WOODWORTH,

Surgeon General U. S. Marine Hospital Service.

WASHINGTON CITY, Oct. 10, 1878.

THE ILLINOIS STATE MEDICAL REGISTER for 1878–9, Dr. D. W. Graham, Editor, has just been issued. In the accuracy of its compilations and the neatness of its typographical appearance it is all that could be desired.

ANNOUNCEMENTS FOR THE MONTH.

SOCIETY MEETINGS.

Chicago Medical Society—Mondays, Nov. 4 and 18.
West Chicago Medical Society—Mondays, Nov. 11 and 25.

CLINICS.

MONDAY.

Eye and Ear Infirmary—2 p. m., Ophthalmological, by Prof. Holmes; 3 p. m., Otological, by Prof. Jones.
Mercy Hospital—1:30 p. m., Surgical, by Prof. Andrews.
Rush Medical College—2 p. m., Dermatological and Venereal, by Dr. Hyde; 3 p. m., Medical, by Dr. Bridge.
Woman's Medical College—2 p. m., Dermatological, by Dr. Maynard.

TUESDAY.

Mercy Hospital—1:30 p. m., Medical, by Prof. Hollister.

WEDNESDAY.

Chicago Medical College—1:30 p. m., Eye and Ear, by Prof. Jones.
Eye and Ear Infirmary—2 p. m., Ophthalmological, by Dr. Hotz.

THURSDAY.

Chicago Medical College—1:30 p. m., Medical, by Prof. Quine.

FRIDAY.

Mercy Hospital—1:30 p. m., Medical, by Prof. Davis.

SATURDAY.

Rush Medical College—2 p. m., Surgical, by Prof. Gunn.
Chicago Medical College—2 p. m., Surgical, by Prof. Isham; 3 p. m., Neurological, by Prof. Jewell.
Woman's Medical College—11 a. m., Ophthalmological, by Dr. Montgomery.

Daily Clinics, from 2 to 4 p. m., at the Central Free Dispensary, and at the South Side Dispensary.

THE

Chicago Medical Journal

AND

EXAMINER.

VOL. XXXVII.—DECEMBER, 1878.—No. 6.

To our Readers and Correspondents.

Beginning with Vol. XXXVII., July, 1878, the CHICAGO MEDICAL JOURNAL AND EXAMINER prints all records of length and weight in terms of the Metric System, and all records of temperature in degrees of the Centigrade Scale. The Metric System, legalized in the United States and Great Britain, is extensively or exclusively employed by other civilized nations, and has thus become an essential part of the international language of science. It is recommended for adoption to the profession in this country by the American Medical Association and other scientific bodies. To-day no physician can afford to be ignorant of its value, its simplicity and the meaning of its terms.

The subjoined tables and scales, which have been kindly prepared for us by Prof. W. S. Haines, will be continuously reproduced in subsequent numbers of this journal, for the ready reference of our readers and correspondents.

Metric Measures of Length.

Millimeter	0.001	of a Meter	0.03937 inches.
Centimeter	0.01	" "	0.39370 "
Decimeter	0.1	" "	3.93707 "
Meter	**1.**	**Meter**	**39.37079** "
Decameter	10.	Meters	393.70790 "
Hectometer	100.	"	3937.07900 "
Kilometer	1000.	"	39370.79000 "

Metrical Weights.

Milligram	0.001	of a Gram	0.015 grains.
Centigram	0.01	" "	0.154 "
Decigram	0.1	" "	1.543 "
Gram	**1.**	**Gram**	**15.432** "
Decagram	10.	Grams	154.323 "
Hectogram	100.	"	1543.234 "
Kilogram	1000.	"	15434.348 "

☞ The United States "nickel" five cent piece weighs five grams, and is two centimeters in diameter.

Approximate Equivalent of Metrical Weights.

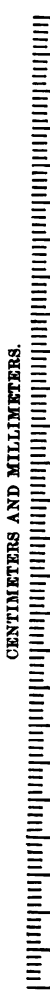
For Rapid Reference.

Milligrams.	*Grains.*	*Decigrams.*	*Grains.*
1 (written 0.001 or |001)*	1/65	1 (written 0.1 or |1)	1 1/2
2	1/32	2	3
3	1/22	3	4 1/2
4	1/16	4	6
5	1/13	5	7 1/2
6	1/11	6	9
7	1/9	7	11
8	1/8	8	12 1/2
9	1/7	9	14

Centigrams.	*Grains.*	*Grams.*	*Grains.*
1 (written 0.01 or |01)	1/6	1 (written 1. or 1|)	15
2	1/3	2	30
3	6/13	3	46
4	7/11	4	61
5	3/4	5	77
6	9/10	6	92
7	1	7	108
8	1 1/4	8	123
9	1 1/3	9	139

A Kilogram=2 1/5 lbs. Avoirdupois.

* The decimal *line* instead of points makes errors impossible.



Metric Fluid Measures.

When using the metric system, fluids are preferably prescribed by weight, employing the gram, its multiples and subdivisions, just the same as with solids, thus avoiding the errors due to refraction, adhesion, and inaccurate measuring vessels. For practical purposes four grams of water may be regarded as equivalent to a fluid drachm of that liquid, and the same may be considered true of tinctures and infusions; syrups, on the average, are about one-third heavier than water, so that a fluid ounce of a syrup will be approximately represented by 43 grams.

If preferred, however, fluids may be prescribed by volume in the metric, just as in the present system, using for that purpose the *Cubic Centimeter*, that is, a volume represented by a cube all of whose sides measure one centimeter. An ordinary back-gammon die is usually about this size. One cubic centimeter (written 1 C. C.) = 16.231 minims. It is approximately regarded as one fourth of a fluid drachm.

Approximate Equivalents of Cubic Centimeter.

0.001	C. C.	=	$\frac{1}{65}$ minim.
0.01	"	=	$\frac{1}{6}$ "
0.1	"	=	$1\frac{1}{2}$ "
1.	C. C.	=	15 minim.
4.	"	=	1 fluid drachm.
16.	"	=	4 fluid drachms.
32.	"	=	1 ounce.

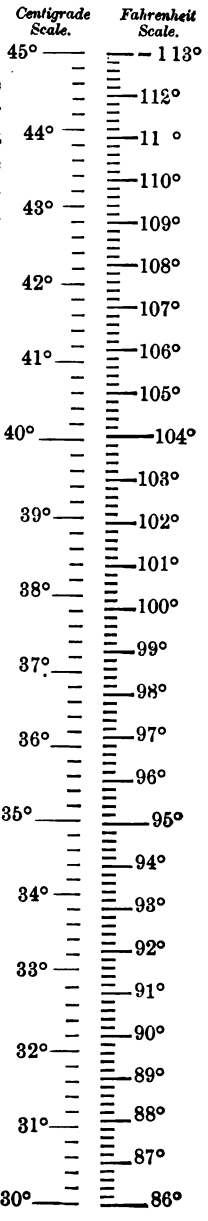
1000 C. C. (usually known as a **Liter**) is a trifle more than one quart, wine measure.

The following prescription—

R: Potassii bromidi, ℥i.
Elixir aurantii, fl., ℥viij.
M.

Would, in metric terms, be written:

Potassic bromide, 32
Orange elixir, 250
Mix.



Original Lectures.

HERNIA OF THE CORNEA — ACTION OF ESERINE AND PILOCARPINE.

(Clinical Lecture delivered at the Illinois Charitable Eye and Ear Infirmary, October 9, 1878.)

By F. C. Hotz, M. D.

Gentlemen: The right eye of this boy exhibits a peculiar affection of the cornea, which, though not very common, is practically so important that it may well occupy your attention for a few moments. Without at present taking any notice of the granular condition of the conjunctiva, and the faint pericorneal redness, you will direct your attention to the cornea. This membrane has lost its brilliant lustre; its surface is dull, uneven, hazy, and traversed by fine, slightly tortuous blood vessels. In the lower half of the cornea the cloudiness is like a uniform thin mist through which you can still pretty well distinguish the color of the iris and the lower margin of the pupil. In the upper half the cloudiness increases in density to form a grayish white opacity. And in the center of this opacity, about midway between the center and upper margin of the cornea, you observe a small, oval, shining spot of the size of a pin's head. When you look at it from the front, it appears jet black, but when you inspect it from the side, you notice that it is a perfectly transparent vesicle which projects a little above the anterior surface of the cornea. You will further notice that through this small vesicle, the color and design of the iris appears better defined than through the lower half of the cornea; indeed, you can see it almost as distinctly as through a normally transparent cornea.

Focal illumination shows better than daylight the perfect transparency of this minute portion of the cornea.

This peculiar phenomenon of a transparent and projecting spot in the midst of a dense opacity of the cornea, is called a *hernia of the cornea or keratocele.* In order to understand its origin and nature, we must briefly consider the anatomical changes which take place in the tissues of the cornea, in case of ulceration. Proceeding from the anterior surface of the cornea the ulceration destroys successively the anterior epithelium, Bowman's membrane, and the several layers of the corneal tissue proper. Now, the first indication of a pathological (inflammatory or ulcerative) process going on in these structures, is the loss of transparency; they become opaque, and therefore an ulcer which has not gone beyond the fibrillar tissue of the cornea, presents a gray, grayish white, or yellowish gray color. But below these layers there is the so-called membrane of Descemet. This is a structureless, very elastic membrane, lined with one layer of pavement epithelium, the posterior epithelium of the cornea. This membrane is not easily affected by ulceration, and, owing to its structureless nature, preserves its transparency; and when a corneal ulcer has extended in depth as far as the membrane of Descemet, its floor suddenly becomes transparent and clear, like an ulcer at the time when the destruction has ceased and all molecular débris has been removed, and the process of reparation has commenced. And, gentlemen, in this stage a corneal ulcer has often been a source of deception to both physician and patient. The inexperienced physician, noticing the remarkable change in the appearance of the ulcer, does not recognize the real, dangerous character of this change, and prognosticates a very favorable, speedy recovery, when to his terror a few hours or days later he finds the cornea perforated. And patients also are often misled. Suppose the ulceration occupies the center of the cornea; its opacity obscures the pupil and impairs the sight; the deeper the ulcer, the denser the opacity and the greater the impairment of vision. Now, picture to yourselves the happy surprise of a man who for weeks has been almost blind with a central ulcer of the cornea, at suddenly finding that he can see again pretty well with that eye. He, of course greets this change with joy as the sure

sign of the long looked-for crisis toward recovery; he laughs at the serious looks of his medical adviser who is far from sharing his patient's hopefulness, but on the contrary earnestly enjoins double caution, lest the eye might be suddenly destroyed. The patient is disposed to think that all danger is removed, since his sight has been restored, and further precaution is unnecessary. But suddenly something gives way, the patient feels a violent pain through his eye, a few drops of water run down his cheek, and the sight is gone, perhaps forever. Descemet's membrane which formed the transparent basis of the ulcer while the patient was enjoying the sudden return of his sight, had yielded to the pressure of the aqueous humor, it ruptured, and a perforation of the cornea was established. This is the usual result of deep progressive ulceration of the cornea.

But when the ulcer is very small the membrane of Descemet may, for some time, form the basis of the ulcer, and under favorable circumstances the cornea may escape the fate of perforation. In these cases a small portion of Descemet's membrane, (which, as I said before, is very elastic) is crowded into and through the tunnel-like canal of the ulcer by the pressure of the aqueous humor, just as the peritoneum is pushed into the inguinal canal in the case of hernia. Therefore the name "hernia of the cornea" is given to this affection, although strictly speaking it is a protrusion of Descemet's membrane alone. Such is the condition of this patient's right cornea. This transparent and prominent spot represents a small pouch of the membrana Descemeti, protruding through a deep, crater-like ulcer of the cornea. The patient, 13 years of age, has granular conjunctivitis, in the course of which ulceration of the cornea is a common complication. And one of these ulcers deepened until it reached the posterior glass membrane. You cannot see the depth of the ulcer because its space is filled by this hernial sac which comes even with, or rather rises a little above the anterior surface of the cornea. But if I should puncture this vesicle with the point of a needle you would see the whole aqueous humor escape, the sac collapse, and a deep defect in the cornea appear in its place.

Usually in cases of this kind the thin membrane of the keratocele is gradually stretched to its utmost capacity, and finally

gives way to the continued pressure of the aqueous humor. This fluid then escapes, the iris falls against the perforation, and is permanently fastened there by agglutination. An adherent leucoma, with all its unpleasant, often disastrous consequences, is the ultimate result.

From these observations, it is obvious what our chief object in the treatment of this kesatocele must be. We must endeavor to reduce the hernia, to prevent, if possible, the occurrence of perforation, and to heal the ulcer of the cornea.

If we possessed a medicine which could so effectually diminish the pressure of the aqueous humor that the membrana Descemeti could resist it without bulging, this remedy would admirably fulfill the indications in our case. It would reduce the hernia of the cornea, and by its reposition would remove the greatest obstacle to a speedy repair of the ulcerated cornea. For as long as the hernial sac occupies the gap of the corneal ulceration, it prevents, like a wedge, its edges from approaching each other, and renders it utterly impossible that granulations can sprout up from the sides and repair the defect. The same remedy would also remove all danger of perforation, because the minute the pressure of the aqueous humor is diminished, all strain which could occasion a rupture, is taken from the membrana Descemeti. Until quite recently, such remedy was unknown to ophthalmic surgeons, and the treatment of a hernia of the cornea consisted in the application of pressure bandage, repeated paracentesis of the cornea, or iridectomy.

The *pressure bandage* should act like a truss; it should overcome the pressure of the aqueous humor upon the posterior surface of the cornea by a counter pressure upon its anterior surface; it should push the hernia back and prevent its coming out again.

Paracentesis of the cornea diminishes the pressure upon the posterior surface of the cornea by withdrawing the aqueous humor. If you take a tensely-filled bladder and let out a part of the contents, its walls will become flaccid with the decrease of tension. So, if you drain off the aqueous humor, the tissues of the eye in general, and the cornea in particular, are relieved of a certain amount of the pressure which the contents of the globe (aqueous humor, crystalline lens and vitreous body) exert upon them. But

the relief afforded by paracentesis is of a very transient nature, because the anterior chamber is speedily refilled with aqueous humor, and, pari passu, the original pressure restored. Therefore the operation must be often repeated if the pressure is to be kept below the normal degree for any length of time.

Iridectomy is known to permanently lower the intra-ocular pressure, and for this reason most surgeons consider it preferable to paracentesis in all cases in which a prolonged diminution of pressure is indicated.

Within the past three years, however, ophthalmic surgeons have become acquainted with two remedies which seem likely to play an important rôle in the treatment of deep ulcerations of the cornea, and other affections which call for a reduction of the intra-ocular pressure. These two remedies are, the alkaloid of the calabar bean, called *eserine*, and the alkaloid of jaborandi, called *pilocarpine*. The sulphate of eserine and the muriate of pilocarpine are the preparations now used in ophthalmic practice. They are both quite soluble in water, making a clear, colorless solution; but in a warm temperature the solution of eserine turns red, and becomes inefficient, while the solution of pilocarpine does not change in color and efficiency. This solution (0.05 in 25 grams of water) before you, has been prepared two months ago; it is perfectly clear yet, and as effective as on the first day.

If you put a drop of it in your eye, you feel a faint smarting sensation, and notice a slight blush of the conjunctiva. But this irritation passes away quickly. After ten minutes the pupil is contracted, and distant objects appear indistinct; in twenty minutes the pupil is constricted to a small pin hole, and distant vision is exceedingly indistinct, but can be cleared up by strong concave glasses. In other words, the eye has become highly near-sighted. The myopia is induced by spasm of the ciliary muscle, and the contraction of the pupil (myosis) by spasm of the sphincter pupillæ. Both alkaloids seem to have the same effect upon the eye; only pilocarpine produces less conjunctival irritation than eserine.

For our present purpose it is particularly interesting to learn that simultaneously with the spasm of the intra-ocular muscles the intra-ocular tension is diminished. In 1876, Laqueur, of

Strassburg, reported * that he observed a diminution of the hardness of glaucomatous eyeballs after the instillation of eserine. In the same year, Adolph Weber, of Darmstadt, published † a very interesting paper, "On Calabar and its Therapeutical Utility."

With a very sensitive instrument (tonometer) he had carefully tested the degree of tension of the cornea before and after the application of extract of calabar bean. A long series of experiments, made in 1869, convinced him of the fact that he had found in the calabar bean a drug which decidedly lessened the pressure upon the posterior surface of the cornea. His conviction was further strengthened by an observation which fully confirmed his experimental studies. In a case of keratocele he observed that after application of calabar the vesicle of the protruding hernia sank back to the basis of the corneal ulcer; and under the continued use of calabar the protrusion of the membrana Descemeti did not return; the ulcer was filled with new tissue and covered with new and transparent epithelium; the eye recovered, and a ring-shaped cicatrix, with a transparent center, was the only trace the keratocele had left. Besides, in keratocele, Dr. Weber found the extract of calabar bean (which he used till 1875, when he substituted the alkaloids, eserine and pilocarpine) most useful in deep, progressive ulcers of the cornea, conical cornea, staphyloma, and peripheric prolapse of the iris.

Wecker, of Paris, who first introduced the alkaloids in ophthalmic practice, fully confirmed ‡ Weber's observations and therapeutical indications of the use of eserine and pilocarpine.

Henry W. Williams, § of Boston, has during the past two years made extensive use of eserine and pilocarpine in the treatment of corneal ulcers. His experience not only coincided with that of the other authors, but he also added superficial keratitis to the affections for which the alkaloids are indicated. "In phlyctenular or herpetic eruptions of the conjunctiva, or of the epithelial layer of the cornea, eserine is of service, especially when

* Centralbl. d. Medicin. Wissenschaften, 1876, No. 24.
† Graefe's Archiv. f. Ophthalmologie, Band XXII, 4.
‡ Klin. Monatsbl. f. Augenheilkunde, 1877, p. 60.
§ Boston Med. and Surgical Journal, March 14, '78.

photophobia is present, and is far preferable to atropia, which, by causing intolerance of light, adds to the patient's discomfort."

The unanimous testimony of these and other observers seems to point out clearly enough the course of treatment we should pursue in our case. And I will tell you that we tried this plan, but were obliged to abandon it soon again. The boy was admitted to the infirmary on the first day of August. The cornea was hazier and the keratocele a little larger than it is now, and the whole upper half of the cornea appeared to bulge out. Pilocarpine was dropped in the eye in the morning and evening. After two days the upper half of the cornea showed the same curvature as the lower half, and the hernia appeared somewhat sunken in. Under the continuance of pilocarpine, however, the eye became very painful, and red around the cornea, and a fresh ulcer made its appearance in the center of the cornea. These unfavorable symptoms increased in degree so much that on the fifth day it was thought best to discontinue the use of pilocarpine. We applied the pressure bandage, and the eye quickly recovered from the attack. In the middle of August a second trial with pilocarpine had the same result. The eye did not seem disposed to tolerate the new treatment; and we had to fall back upon the old resources of pressure bandage and iridectomy. Under the continued use of the bandage, the eye improved in so far as the lower half of the cornea cleared up sufficiently to afford us a pretty good view of the iris and pupil. We could then ascertain that the pupil was contracted and the edge of the iris firmly fastened to the anterior surface of the crystalline lens.

This state of the pupil fully accounted for the intolerance the eye had shown for the pilocarpine treatment. It is a well established experience that an eye with extensive or circular posterior synechiæ as the result of iritis, generally does not well bear any stimulating, topical treatment. And it is evident that pilocarpine, the most powerful stimulant for the musculature of the iris must have a bad effect on an eye which has just recovered from an inflammation of the iris.

The failure of pilocarpine in our case, therefore, only confirms the experience of others to the effect that the use of this remedy

is contra-indicated in affections of the iris, and consequently also in corneal troubles when the iris is implicated.

The condition of the iris and pupil at once settled the question what the next step should be in the treatment of our case. For reasons which I shall discuss at some future occasion, circular synechiæ of the iris are regarded as a strong indication for the performance of iridectomy. And, as I have stated before, the same operation is chosen by most surgeons if an operative interference is deemed necessary in case of keratocele. The two conditions being united in our case, there could be no doubt but what iridectomy should be performed; and the only question to be decided was in regard to the locating of the artificial pupil. The greater transparency of the lower half of the cornea suggested a downward iridectomy, because the operation could be done under more favorable conditions, and would probably at once restore a pretty good sight. But then, a coloboma of the lower portion of the iris is a greater blemish to the eye than a defect in the upper half of the iris, because the latter is to a great extent concealed by the upper lid. Besides, the upper half of the cornea was not so cloudy that the point of an instrument in the anterior chamber could not be seen without difficulty; and it was very likely that after the operation this haziness would gradually disappear, and the upper part of the cornea would become as clear as the lower. And finally, if a piece of the upper half of the iris was excised, the iris was definitely removed from behind the keratocele, and could not be caught in a perforation of the cornea if the hernial sac should burst after all.

These reasons induced me to perform an upward iridectomy on September 19. The eye recovered quickly from the immediate effect of the operation, and has never since shown any signs of irritation, although occasionally astringent applications were made upon the thickened and congested conjunctiva. Under the continued use of the pressure bandage the protrusion of Descemet's membrane has decidedly diminished in degree and circumference. This sign, of course, is the best indication that the eye is improving and progressing favorably toward recovery.

Original Communications.

THE SEQUEL AND FATAL TERMINATION OF A CASE OF LYMPHATIC ENLARGEMENT OF THE RIGHT LEG AND THIGH.

By W. H. Day, M. D., London.

(*A paper read to the London Pathological Society, May 24, 1878.*)

[Through the kindness of the President of the London Pathological Society, we were recently put into communication with the author of the subjoined paper, which we desired to consult. Dr. Day has kindly forwarded to us advance sheets of the Transactions of the London Pathological Society, from which we reproduce his interesting narrative.—Ed.]

In order that this remarkable case may be understood by members of the Society who are unacquainted with the history and report as described in the Society's Transactions (Vol. II., p. 104), I deem it advisable to briefly recapitulate the leading symptoms as recorded there for the information of members who were not present at the reading of the paper.

Nine years ago I recorded the case of T. C. D., at that time 7 years of age. The right leg was noticed to be larger than the left when he was 2½ years old, causing no inconvenience, and not affecting the general health. When four years old the swelling extended into the thigh, and like the leg was firm and inelastic; yellowish white spots appeared over the head of the tibia, looking like small encysted growths, containing cheesy matter, and subsequently drying up and disappearing. After exercise, fatigue or an attack of indigestion, the leg became hard, brawny, and covered with patches of erythema. When the inflammatory blush

disappeared, the limb presented yellowish patches like pityriasis versicolor. In 1866 he could not flex the limb, and the symptoms were thought attributable to obstruction of nearly the whole length of the femoral vein. The prepuce became much hypertrophied, and, in 1867, necessitated removal from the constant dribbling of urine. In 1868 a pearly vesicle like herpes formed on the edge of the prepuce, which ruptured and discharged a chylous fluid like lymph. After this the limb lessened in size. In January, 1869, as much as half a pint of creamy fluid escaped from this small orifice, and the following day there was shivering and rigor; smaller and transparent vesicles began to form on the glans penis, discharging lymph from time to time, and he was very ill. The toes were swelled and of waxy whiteness, whilst the diseased limb, in circumference, was three inches larger than the left. For the next three years he was tolerably well, but suffered at uncertain intervals from attacks of weakness, and pain and swelling in the limb.

September 15, 1872.—After two days of fatigue and running about, he woke up with pain and stiffness in the leg, the foot and toes being more particularly attacked. When lying down he could not raise the limb, and this loss of power accompanied each attack. There were thirst, headache, and pungent heat of skin; temperature 39°, pulse 130 full, with considerable tension. Calomel 0.06 and a saline aperient draught emptied the bowels and relieved the pain and excitement. On the 17th he was easier, and all the discomfort was in the foot. On the 18th (next day) pain came on in the knee-joint, which was exquisitely tender and sensitive; he cried out from the suffering, and could get no ease at night. A dose of chloral failed to procure him any sleep. He remained in considerable pain till the 20th, when I was summoned to him in the country. The knee was partially flexed on the thigh—it was hot, swollen and pale; there was effusion beneath the integuments on either side of the patella, but apparently not in the joint itself. A warm lead lotion was kept constantly applied under oiled silk, and the swelling diminished. The urine was densely loaded with pink lithates, and on standing in a two-ounce bottle only four grams were clear and free from sediment. Citrate of potash in water was given as a

drink. When the leg was at rest he remained free from suffering, and was able to travel from Cambridgeshire to London on the 23d, but the slightest movement of the joint, or the least pressure, gave pain.

The ten days' confinement to bed had greatly reduced his strength, and his loss of flesh was very noticeable ; he was pallid too and exsanguine, and his voice too at these times became husky and weak.

24th.—There was no pain in the knee except on pressure and the movement of the limb ; the swelling was especially marked over the tubercle of the tibia, and occupied the site of the two old dried lymphatics ; there was distinct fluctuation, but no redness or throbbing. The reduction in the size of the thigh had never been so marked, and the skin, instead of being stretched and hard, was lax and supple.

The following were the measurements of the respective limbs:—

DISEASED OR RIGHT LIMB.		SOUND LIMB.	
Above knee.....35.0	centim.	Above knee.....25.0	centim.
Middle of thigh...37.5	"	Middle of thigh...31.5	"
Upper third do....39.0	"	Upper third do...32.5	"
Below knee.....30.0	"	Below knee 30.0	"
Calf.....32.5	"	Calf.....20.0	"
Above ankle.....22.5	"	Above ankle.....17.5	"

27th.—The swelling of the knee was subsiding—great tenderness over the tibia previously alluded to.

October 2d.—For some months he had been greatly troubled with nettle-rash, the back and shoulders were mostly affected, but the diseased limb was not more involved than the rest of the body. He experienced a good deal of pain in getting down stairs. The chief symptoms at this time were debility, pallor of face, loss of appetite, and inability to straighten or bear any weight on the affected limb.

8th.—For the last four days he had complained of great pain in the *left* inguinal region, and there was an enlarged inguinal gland the size of a small nut ; to this spot he referred his suffering, and any movement of the limb increased it ; he was exhausted and

feverish towards the evening, and in the night perspired a good deal. His appetite was very capricious, and he was fretful and irritable on slight provocation. The affected limb had a very numbed sensation, which probably arose from exhaustion and weakness of the muscular system. Any attempt to move the limb threw the muscles into spasmodic action, and he would shiver like a person in the cold stage of ague.

22d.—There had been increasing pain in the right knee-joint for a week. He often awoke in the night from the pain, and no ease could be obtained till he had taken a full sedative. I had my doubts whether mischief was not proceeding in the joint, but Sir James Paget, who saw him, considered the pain neuralgic, and advised a continuance of quinine, brandy, and nourishment.

November 5th.—There had been no ease since last report, and the suffering was pitiable to witness, coming on in paroxysms at night, sometimes lasting for hours, and preventing sleep. Sir J. Paget saw him again, and advised bromide of potassium, a liniment of aconite, chloroform and opium, which seemed for a time to relieve him. About the close of the month the pain in the knee-joint departed.

December 6th.— For a week he had complained of pain in the right hip, below and to the right of the anterior superior spinous process of the ilium. Yesterday, and again to-day, there had been great pain coming on in the three outer toes of the right side, and a general aching of the limb. When pain was present the three toes trembled like the rest of the limb, and were pale, smooth and shining. There was no oscillation of temperature, which was normal, morning and evening scarcely varying; the night perspiration had subsided, but the pulse was weak and unsteady, and his appetite failed, perhaps by reason of the sedative, which he was compelled to take at night.

18th.—He came down to dine to-day, but not without pain. For the last week he had suffered from extreme nausea, and at times severe vomiting and retching. The pain had come on in a moment when most occupied with his amusements. Of late he has looked very sallow, and complained of pain over the back of his neck, and his eyes have become weak and inflamed. I now prescribed steel wine and arsenic twice a day after meals.

25th.—He came down stairs to dine, and was tolerably well, though he looked dreadfully pale and exhausted; two days later there was agony in the leg for hours, and he was very sick throughout the day without apparent cause.

1873, January 8th.—Having been free from pain for a week, he went out for a drive. As medicines failed to afford relief they were given up.

March 1st.—He passed a round worm, having for weeks suffered from nausea and vomiting.

19th.—Was kept awake with agony in the knee and starting of the limb; he had no rest till he had taken a third dose of chlorodyne.

October 18th.—For the last month he had been free from pain, sleeping well and enjoying his food, but easily tired after any kind of exertion. At Felixstowe, in Suffolk, where he stayed for six weeks, he did not get on so well, the place being cold and the comforts much less than at home. No discharge of lymph since March—a period of six months.

Used crutches for 1½ years, and during this time was comparatively free from pain.

1875.—Sufficiently well to attend with tolerable regularity at school; he had comparative freedom from pain, which was now always in the foot, and there was an occasional discharge from the foot also.

1876.—In July (weather very hot), after much fatigue, he was seized with a severe feverish attack, lasting four days, during which the leg was very hot and red; he was much weakened, and after going from home, took cold, from which he suffered for two months, accompanied with cough. During this time the discharge occurred frequently, and he was much reduced and prostrate.

In October, when at the seaside, and after running about, he had a sharp febrile attack; on the 28th, when he attempted to get out of bed, he fell; the big leg, which had been stiff throughout the night, proving useless to him and painful. A week's rest in bed restored him, though, on first getting up, he was obliged to use his crutches again for a few days.

On December 13th, he took cold and had a return of cough, with slight bronchitis, and kept his bed and room for a month, getting out again on January 12th, 1877.

All the autumn term his tutor had come to him at home; but at his especial wish, after Christmas he resumed his school life, and for the next month enjoyed unusually good health, practicing the organ daily, and working six hours. He suffered but little pain, and had only a slight occasional discharge from the foot.

On January 29th, 1877, whilst sitting at dinner, his mother noticed that the lower half of his face turned livid, and the servants noticed it also, but he did not complain. On the following day he returned from school with a headache, which had come on an hour previously. He went to bed directly, and remained there part of next day. He was unusually well the three following days, till taken ill in church.

February 4th.—Went to church well at 11 a.m., and whilst in an erect posture, suddenly fell down in a state of syncope at 12. On rallying, he was led out into the open air, when he complained of great pain over the hypogastrium, and he was deadly pale. He, however, was able to walk home with assistance, and just as he entered his bed-room he began to shiver, and was placed on the bed in a state of collapse, with imperceptible pulse, livid hands and features; the tremor was as great as was seen in the cold stage of ague. He referred all his pain to the hypogastrium. Brandy was given at once, and t. opii 1 C. C. thrown up the rectum.

12:45.—The pain had now shifted into the leg and knee, and, as it was very severe, the sedative injection was repeated.

1 p. m., free vomiting took place.

1:30, vomited a quantity of bilious fluid.

2:30, reaction fully established; temp. 39.5°; pulse 136 full and bounding; skin hot and pungent; intense thirst; urine passed freely, copious and clear.

4:15, restless, in great pain, and a draught of hydrate of chloral and bromide of potassium, of each one gram, was taken.

5:0, in great agony and begs for relief. About 8 grams of bichloride of mythelene were inhaled, extending over half an hour.

7:0, free from pain at intervals for a few minutes together;

skin moist; temp. 39.1°; pulse 132; R. 56, short and catching.

11:30, temp. 40.2°; pulse 144; R. 48; urine passed; conjuntivæ injected; much wandering. A soap-and-water enema brought away some scybalæ from the bowel and a little fæcal fluid.

5th.—1:15 a. m., temp. 40.3°; pulse 140; R. 44, very shallow; sleeping.

2:15, temp. 40.5°; pulse 140; R. 48; sleeping restlessly; drank iced water, but did not understand anything addressed to him.

3:15, aspect wild, staring and excited; has tetanic spasms in the arms, and both hands spasmodically clenched; *iced water cap applied* to the head.

4:0, he looks brighter, swallows well, and the hands are relaxed; temp. 40.6°; pulse 144; R. 40.

5:0, temp. 40.6°; pulse 140; R. 44.

6:0, temp. 40.3°.

7:0, temp. 39.9°; pulse 142; R. 44.

8:30, bowels acted.

9:30, bowels acted.

10:0, temp. 39.5°.

10:30, very copious action of bowels.

11:45, temp. 39.4°; pulse 140, very weak and small; face cool and lips rather dusky; breathing quiet and regular, but still quick; intellect quite clear. Drank a small quantity of beef-tea and iced champagne.

1:30 p. m., temp. 39.2°; pulse 140, weak; face alternately flushes and turns pale; is very restless and unconscious, and the iced cap is kept on with difficulty.

2:30, temp. 39.2°; pulse 140, very weak; R. 44; the bowels acted unconsciously, after which he asked for some cold water; face ashy.

3:30, bowels again acted; sick after a little champagne and beef-tea.

4:10, sickness and pain in stomach; slight motion; cannot rest quiet for a moment together; t. opii 1 C. C. per rectum.

6:0, temp. 40.0°; pulse 160, fluttering; R. 48; rested after the enema, and the bowels have not since acted. Two decigrams of quinine, t. opii 1 C. C. and beef-tea gm. 60 ordered to be thrown into the rectum every two hours.

7:0, temp. 40.0°; pulse 160; R. 56; unconscious.

9:0, temp. 39.9°; pulse 160, so small that it could scarcely be recognized; R. 56; unconsciousness continues; extremities feel rather cold, and cheeks also; enemata returned.

12:0, temp. 39.8°.

6.—2:30 a. m., temp. 39.8°; R. 36, irregular.

3:0, pulseless; heart's action feeble and tumultuous, but the sounds could be distinctly recognized; constantly tossing about, so that it was not easy to ascertain whether there was a cardiac bruit; the aspect and general symptoms seem to indicate the formation of clot in both cavities.

4:30, temp. 39.6°; R. 44, very irregular and shallow—expiration much prolonged; still pulseless, and unable to swallow.

6:30, too restless to have the temperature taken.

9:0, pulsation can be felt faintly in both brachials, but not below; lividity increases, but no stertor; pupils small.

11:0, temp. 39.1°.

12:30, about half a pint of high-colored urine drawn off, sp. gr. 1014, acid, faint cloud on heating, and not quite clear by nitric acid. He grew gradually worse, tossing to and fro, throwing up his hands, and rolling his head from side to side; his hands became very cold and livid, and at 3 p. m. his breathing was more labored and less rapid; the expiration at one time was very long, but about 3:30 it changed its character, whilst the inspiration became long and labored, both acts being free from stertor. About this time his face grew paler and colder, and he expired at 3:45 p. m.

The post-mortem was conducted with great care by Dr. Wickham Legg and Dr. J. Ormerod nineteen hours after death.

The following measurements were taken: from the left anterior superior iliac spine to top of left patella 44 Cm.; from right anterior superior spine to top of right patella 42 Cm. From left anterior superior iliac spine to left inner malleolus 83

Cm.; from right anterior superior iliac spine to right inner malleolus 88 Cm.

Left limb, half way between knee and ankle	25.6	centim.
Right limb	39.4	"
Largest circumference of left knee	30.6	"
" " " right knee	44.4	"
Girth of left thigh at a point half way between anterior superior iliac spine and patella	38.0	"
Do. right do	51.0	"

Nothing noteworthy was found about the heart. The lungs were œdematous, but no other morbid change was present. All the viscera of the belly were natural.

There was no obstruction or old thrombus found in the vena cava or iliac veins. The lumbar plexus on both sides was natural to the naked eye. There was no increase in size of the inguinal glands. The large size of the right leg seemed due to an increase in the subcutaneous tissues solely, not to the muscles. No other appearance of disease could be perceived.

Dr. Gowers examined the spinal cord with the microscope and found it quite natural.

Remarks.—The results of the post-mortem examination explain little or nothing, on account of our possessing insufficient data of the physiology, and still feebler knowledge of the pathology of the lymphatic system. There was no evidence from this examination of any obstruction to the femoral vein, and apparently no enlargement of the arterial or venous trunks, though it seemed highly probable that some great disturbance took place from time to time owing to the heat of the limb, pain and swelling, and especially those rapid local changes in the limb which ensued shortly after the fatal seizure. It may be said that the last attack was merely the severe form of many previous, but less formidable attacks. At no time was the urine chylous.

This case, in the character of the discharge, and large size of the limb, resembles those described by Mr. Sidney Jones ("Path. Trans." vol. xxvi., 1875), Mr. Berkeley Hill, and Dr. Cholmeley ("Clin. Trans." 1869), but it differs from these, and all I have

been able to meet with, in the increased length and growth of the bones of the affected limb. In the report furnished by Mr. Callender and Dr. Burdon-Sanderson, they say that "a perfectly similar case is recorded by Dujardin in 1854." Even in Mr. Thomas Smith's case of nævoid elephantiasis ("St. Barth. Hospl. Rep." vol. v.), where the enlarged limb was three inches longer than the sound leg, "the lengthening was due to the excessive hypertrophy of the integuments over the sole and heel."

This case would be placed by the systematic surgeon under the category of "lymphatic elephantiasis," Mr. T. Smith ("Nævoid Elephantiasis," "St. Barthol. Hospl. Rep." vol. v., 1869) having already distinguished three varieties of elephantiasis arabum —lymphatic, vascular, and climatic—the last being the swollen leg seen in tropical climates. Indeed, referring to my first report of this case, he has himself already reckoned it as an instance of the lymphatic variety of elephantiasis.

A CASE OF PUERPERAL CONVULSIONS, ATTENDED WITH RUPTURE OF THE UTERUS AND RECOVERY.

By A. C. Rankin, M. D.

(*Read before the Central Illinois Medical Association, in May*, 1878.)

On my return from the American Medical Association, at midnight, on June 9th, 1877, a messenger was waiting for me to visit Mrs. L., living eight miles in the country. Upon my arrival at the house, I found that Mrs. L. had been suffering from puerperal eclampsia since four o'clock of the previous evening. She was a large, powerful woman, aged twenty-three, and about seven months pregnant with her second child. She had had no trouble with her first confinement. Her spasms were very violent, and occurred at intervals of from fifteen minutes to one hour. She was unconscious from her first one, and violently

delirious between her convulsions, so much so that it required four men to hold her or to keep any clothing upon her. She was also suffering from general anasarca, which proved that her convulsions were caused by uræmic poison.

As it was impossible to get her to swallow medicine, I bled her very freely, but it made no impression whatever upon her convulsion or delirium. I pointed my finger nail and inserted it through the os and ruptured the membranes, in order to induce premature labor. I then went home for chloroform and obstetric case. Upon my return labor had commenced, and I assisted by dilating the os with my fingers. The dilation was slow and tedious. She had no convulsions while under the influence of chloroform, and her pains occurred at about every ten or fifteen minutes. After a few hours the chloroform gave out, and her spasms and delirium returned as violent as before.

June 10th. At 4 p.m. the os was dilated so that I could have performed craniotomy, but it was impossible to hold her hips still enough to render the operation safe. About one hour later, while I was oiling my arm, intending to turn and deliver, she took a violent spasm and pain both at the same time; suddenly both ceased, and she settled back in the bed in a collapsed condition. Supposing that she was dying, I applied ammonia to her nostrils, and poured whiskey into her mouth. As soon as respiration was established, I introduced my hand and found the child had passed through a rent on the left side of the uterus into the cavity of the abdomen to its armpits. Seizing the feet, I soon brought it to the world stillborn. The patient was meanwhile lying in a semi-comatose condition. Upon reaching for the secundines, I found them also in the cavity of the abdomen. After removing them, I introduced my hand, leaving my thumb in Douglas' cul-de-sac, and my fingers in the abodomen, and scraped out a quantity of blood and clots, cleaning the cavity of the abdomen as well as possible, and then replaced about a foot of the small intestines, which had escaped into the uterine cavity.

By that time the uterus had begun to contract. I kept the back of my hand against the rent, and held back the intestines. In about half an hour the uterus contracted so as to expel my hand. The rupture commenced about 2½ centimetres above the

utero-vaginal connection, and extended up the left side about eight inches. At the time I removed my hand the rent was between 6 and 8 centimetres long.

June 11th. Returned early in the morning; found patient quiet but still unconscious, having had no convulsions since she was delivered of the child; pulse 67. She was still suffering from the shock; would eagerly swallow anything placed in her mouth, and appeared hungry. Ordered beef tea, and a little hot water and whiskey. Remained with her all day; by evening she had rallied somewhat; pulse 80.

June 12th. Patient had become conscious during the night; pulse 90; complained of pain in left inguinal region; ordered a turpentine stupe, and gave morphine with quinine.

June 13th. A large dose of oil was given to her in the night without my knowledge; however, it operated without doing any apparent harm; pulse 105; pain in her side about the same; a cake as large as my hand had formed at the seat of the pain. Ordered acetate of potassa, and continued the morphine and turpentine stupes.

June 14th. Was called in the night; arrived at 3 a.m.; pulse 135; abdomen very much enlarged and tympanitic; she was suffering from general peritonitis. I made a solution of tincture of veratrum viride with water, and gave her a teaspoonful every hour. In four hours it reduced her pulse to less than 100. I then gave three centigrams of morphine every two hours. The second dose relieved her pain, after which the dose was reduced and given every two to three hours, alternating with the veratrum. I had her sponged off twice each day, her bed kept perfectly clean, and her napkins saturated with a solution of carbolic acid. I remained with her all day, watching the effects of the veratrum, and keeping her pulse at from 95 to 100. Her stomach remained in good condition, retaining medicine and nourishment.

June 15th. Patient worse; bowels very tympanitic and tender; pulse 110; stopped morphine and gave rhubarb and bicarbonate of soda. It operated by noon, greatly relieving the tympanitis. Soda and morphine were next given, and turpentine stupes continued.

June 16. Pulse 95; bowels reduced but still tympanitic. Cake still in left inguinal region.

June 18th. Patient had a chill but no fever, and slight rigors during the day. Cake in her side soft and fluctuating.

June 19th. Had a cold, clammy sweat; gave whisky and quinine.

June 20th. An abscess broke, and about four ounces of thick pus were discharged per vaginam. Cake in her side had disappeared.

June 21st. Patient evidently convalescent. From this time she improved and made a good recovery. Her dropsy had gradually disappeared.

In December, 1877, she aborted at about the third month. No physician was called, and I have not learned the particulars. I have seen her since, however, and she appears to be in good health.

P. S. Since the above was read, I was called Oct. 31, 1878, to see Mrs. L. I found her in labor; in a few hours she was delivered of a healthy child, weighing seven pounds. Her labor was natural, pains regular and quite severe, but two of them being required to expel the child after its head had passed the uterus.

THE HORRORS OF TEETH FILLING, with the preliminary gouging and filing, are to many so unpleasant that they prefer the pain of extraction to the annoyance of filling. In future, they may take their choice without the necessity of a sacrifice of the tooth, if they prefer extraction. Dr. Weil, of Munich, has employed and advocated the method of first extracting the tooth, filling it with gold or amalgam, and then replacing it. He states that the results are excellent, and the teeth can be freely used. He keeps the tooth out of its socket for one or two hours, as may be necessary, and yet the tooth is ultimately firmly fixed. The method is applicable to both bicuspids and molars, and will probably be chosen by many persons, provided it is found as successful in other hands as in those of the inventor.

Clinical Reports.

NOTES FROM PRIVATE PRACTICE.

Is the Bite of the Heterodon, or Spreading Adder, Venomous?

If this question were asked of a body of herpetologists, there would be but one answer; but if the medical profession were interrogated, two very positive and diametrically opposite responses would be made. So far as my observation goes, the great majority of the latter would respond in the affirmative. For example, of thirteen of the most prominent physicians of this vicinity to whom I have put this question, every one affirmed that the wound inflicted by the heterodon (or spreading adder) was venomous, and that they had never known of a contrary opinion being held. Although none of these gentlemen had treated a case of poisoning by this reptile, all had heard of cases; and yet, when the reports of such cases were thoroughly investigated, no positive connection between the supposed cause and the actual result could be demonstrated. One of the reports, on which such a belief was based, was related to me by three of the thirteen physicians referred to above, each giving the circumstances quite differently, but, of course, as he had heard them vouched for by others. All appeared equally positive that a death had been caused by the bite of a spreading adder. The details of this case, as I afterwards obtained them from the family, were these: Two boys, aged 8 and 16 years respectively, were walking, barefooted, on a prairie in which the grass was very thick and high. While thus engaged, they heard a "rattling noise" close by in the grass, which at the time very much alarmed them. After reaching home, the younger boy was suddenly taken ill, and during the next 24 hours died. A

small scratch was discovered on the left foot, which was somewhat swollen.

It so happened that on the same evening when the boys were on the prairie, and near the place where they were frightened, a spreading adder was killed.

These two facts are all the evidence there is to prove the case. The symptoms, described from memory by the parents, are those of some injury of the nervous centers, such as that of insolation, the latter being very probable, as the accident occurred upon one of the hottest days of summer.

Comment upon the history given above is quite unnecessary; yet it is on such evidence that it is generally believed throughout the country, for miles around, that Mr. D—— lost a son from the bite of a spreading adder. I might refer to other reported cases, but this is the only one I have investigated in which there was a shadow of evidence.

Of SPREADING ADDERS, Prof. E. D. Cope recognizes two species and two sub-species that occur in the United States (*Heterodon platyrinus* and the sub-species *atmodes*, and *H. simus* and the sub-species *nasicus*). Both species are ovoviviparous; all flatten the head and hiss furiously when angry. They are known by the various names of *Spreading Adder*, *Blowing Viper*, *Hog-nose Snake*, *Black Viper* and *Spotted Viper*.

It is a universally recognized fact among naturalists, so far as I have been able to learn, that none of the species are venomous. Profs. Baird and Girard, in their "Catalogue of North American Reptiles," say of them: "All the species exhibit a very threatening appearance when alive, in flattening the head, hissing violently, etc., but are perfectly harmless." Prof. Jordan says (Manual of the Vertebrates of the Northern United States): "A very variable species; when angry, it depresses and spreads the head, hissing furiously, thus exhibiting a very threatening appearance, but it is perfectly harmless." Prof. E. D. Cope, in a private letter, makes a similar remark. A thorough examination of the mouth of these serpents fails to reveal a trace of poison fangs.

In conclusion I submit the following observations:

I. In June, 1876, I put a mouse in a box with a medium-

sized spotted spreading adder; the latter immediately attacked the mouse, striking him a number of times, once producing a flesh wound in the jaw; the reptile soon, however, straightened up his head, and became quite reconciled to his companion. It now was the mouse's turn, and he proceeded to revenge himself by commencing to eat up his antagonist. Beginning at the tail, he ate nearly two inches of the snake in the course of an afternoon, without encountering any further resistance. The next day the mouse was as lively as usual.

II. I put a grown cat in a box with two large black spreading adders; they immediately attacked and struck the cat several times, and then became quiet.

III. The next day I put a half grown chicken in the same box; they struck it several times, but neither chicken nor cat showed any signs of poisoning.

IV. My friend Mr. F. Stein, while putting a large spotted spreading adder from one box to another, was struck by it on the back of the hand, making a scratch nearly an inch long; the wound healed without one untoward symptom.

I should mention one of the habits of this reptile which does not seem to be generally known; it is that of feigning death. I have frequently struck them rather severely with a switch, when, after making futile efforts at attack, they would seem to bite themselves (which they really never do), and then turn on their back as if dead. A few moments of quiet are all that is necessary to revive them, when they will turn over and beat a hasty retreat.

J. SCHNECK, M. D.

MT. CARMEL, ILL.

A Case of Symmetrical Gangrene of the Fingers.

On the 15th of June, 1878, Mr. D. T., formerly a farmer, but not now engaged in business, aged 75 years, was attacked with bilious fever, in the early stage of which an old inguinal hernia became strangulated. The usual manipulations were made, and failed to reduce it, but in a second attempt made on the evening following were successful.

His liver was torpid, and a jaundiced condition supervened,

with feeble pulse, a deranged and depressed condition of the whole system, and a disposition to diarrhœa.

He was put upon quinia, mercurials, diaphoretics, etc., until the subsidence of the fever, when he was given muriatic acid, with bitter tonics and iron, under which he improved so much that after about three weeks from the attack it was not thought necessary to continue attendance.

July 27th, called to see him again, found him sallow and depressed, his lower limbs œdematous. He said this swelling had been coming on for two weeks; pulse feeble, urine scanty, and high-colored, and diarrhœa. Upon examination of the heart, the first sound was found nearly normal, but the second was prolonged and rasping, indicating defective closure of the semilunar valves, probably due to partial ossification. He was given an infusion of digitalis, with potassium iodide and syrup of squills; also carbolic acid, tincture opium and bismuth for his diarrhœa.

The secretion of the kidneys became free and the swelling of the limbs diminished; otherwise his condition continued about the same for a week, when intense pain began in the second, third and fourth fingers of the right hand, extending up his arm to the shoulder. This pain was continuous, but much increased at night.

In a few days the tip of the third finger became livid, and soon after was gangrenous.

Carbolized oil, flaxseed meal poultices, with laudanum and various other applications, were made till it became gangrenous, when it was enveloped in brewer's yeast. The tip and the front side, as far up as the second metacarpal articulation, became sphacelated, and remained in this condition for a little time, when a line of demarcation began to form.

This line of demarcation deepened until the 24th of September the slough with a shell of the bone of the third phalanx were removed, leaving a healthy granulating surface. The reparative process went on slowly but kindly till the middle of October, when it was completely healed. A few days after the slough was removed from the finger of the right hand, the same severe pain began in the thumb of the left hand. The end soon became

livid and afterwards dark purple. It was promptly enveloped in yeast well carbolized. This pain continued with greater or less severity for about a week, when it gradually subsided. The skin sloughed off, and the part healed.

October 30th, patient in fair health, is able to walk two or three miles a day, and says he enjoys life almost as well as he did in his younger days, only complaining of pain and swelling below the knees.

In Von Ziemssen's Cyclopedia, vol. vi, art. Chronic Endarteritis, page 383, we find a description of similar symptoms, due to disturbed circulation on account of disease of the arteries, and called symmetrical gangrene, because the arterial disease is bilateral.

J. T. STEWART, M. D., and
PEORIA, ILL. NOBLE HOLTON, M. D.

A Case of Traumatic Tetanus.

Manuel Arrsend, a creole boy, aged 11 years 9 months, was attacked by tetanus on the 16th of September, 1878. I was called on the 19th, 2 p. m.

The boy had picked up a splinter with his left foot on the 8th of September. The splinter had been extracted by his grandmother, an old lady of about 65 years of age, the wound washed, bandaged up with rags, and left to take care of itself. Healed well.

When I arrived at the house, I found traumatic tetanus well developed. Urine very scanty and highly colored; about 3½ oz. were let in 10 hours; skin hot and dry, pulse 136, temp. 39.5, respiration 30, great rigidity of all muscles.

I opened the bowels with the following injection, as they had not moved once in three days:

℞ Extr. sennæ liquidi, salis amari, āā, 25.0
Aq. menthæ pip. 200.0, M. D. S. enema.
Use one-half at once, the rest in 2 hours.

The following mixture was also prescribed:

℞ Potass. bromid.....	15
Hydrati chloralis.....	8
Aquæ menthæ pip.....	120

M. D. S. Tablespoonful every 2 hours, or when required.

The enema was administered at once, and operated three times well. The mixture I administered myself. Putting one corner of the mouth gently aside by means of the handle of a teaspoon, I succeeded in making the patient swallow two tablespoonfuls at once, dropped slowly between teeth and lips. Spasms allayed almost instantly. A flax seed poultice (hot) was ordered to the cicatrix of the wound. On my return at 7 p. m., I found the patient quiet. Pulse 136, temp. 39.5, respir. 30.

Sept. 20th, 7 a. m. The patient had passed a quiet night; spasms were promptly controlled by chloral. Passed seven ounces of urine; urine red, otherwise natural. Pulse 128, temp. 39.2, respiration 30.

As a drink I ordered carbonic acid (Seltzer) water; also, the following liniment:

℞ Tinct. radicis aconiti,
Chloroformyli, āā..... 15
Spir. camphoræ 100

M. D. S. Sponge body and limbs every 3 hours.

Five p. m. Patient complained of burning whenever the liniment was applied. This was, therefore discontinued, and the following salve used in its place:

℞ Ungti mercurialis cinerei (fortioris)..... 8
Extracti belladonnæ..... 4
Ungti camphoræ..... 30

M. ft. ungt. S. Apply 4 grams to the abdomen every 3 hours.

Sept. 21st, 7 a. m. Patient had passed a good night; had urinated twice naturally. Temp. 38.8, pulse 118, respiration 26. I ordered the following mixture:

℞ Extracti physostigmatis venenosi ..... 0 | 07
Pulv. gi. mimosæ, qs.
Aquæ menthæ piperitæ..... 100

S. Teaspoonful every two hours.

The ointment was discontinued, and the liniment used again. Muscles still rigid.

Five p. m. The patient has been in a continual slumber since this morning. He was easier this evening than at any time previous. Muscles of the face less rigid. I ordered Liebig's beef-

tea. The liniment had to be discontinued again and the ointment used.

Sept. 22d, 7 a. m. Patient had rested well during the night; urinated twice naturally. Pulse 112, temp. 39.2, respiration 26. No pain; deglutition quite easy. 5 p. m. No change since morning; everything continued.

Sept. 23, 7 a. m. Patient had rested well, and could separate his teeth sufficiently to make the tip of his tongue protrude. Muscles in general less rigid; no pain. The bowels were opened by injection, as before. Profuse epistaxis had set in at 5 this morning, which lasted about half an hour. Temp. 38.6, pulse 106. Previous treatment continued. 5 p. m. No change since this morning. Patient urinated naturally at 4 p. m., and had two operations of the bowels, which were natural. Beef tea and mineral water continued; chloral mixture decreased to half doses.

Sept. 24, 7 a. m. Profuse epistaxis at 1 a. m.; the blood was very dark. Slight twitching of the muscles was noticed and promptly allayed by a full dose of chloral. The patient could open his mouth fully 3 centimetres, could flex and extend his legs quite easily, and carry the feeding cup to his mouth without help. He urinated several times naturally. Pulse 106, temp. 38.6. 2 p. m. Patient had slept three hours since this morning. I visited him once more at 7 p. m., and finding him getting along well, ordered former treatment to be continued.

Sept. 25th, 7 a. m. Profuse epistaxis at 4:30 a. m. Patient could protrude his tongue one-half inch, and separate his teeth fully two lines. He had urinated naturally during the night, and was able to flex and extend arms and legs freely, and to change his position in bed without help. Temp. 38.6, pulse 106. I called again at 12 m. and 7 p m. No change.

Sept. 26th, 7 a. m. Patient had passed a nice night; passed fæces and urine naturally. Temp. 38.4, pulse 102. He could separate his teeth 7 centimetres. I called at 2 and 7 p. m., and ordered former treatment to be continued.

Sept. 27th, 7 a. m. Found patient sitting up in bed. Had urinated three times and defecated once naturally during the night. Temp. 38.4, pulse 102. He could eat biscuits and milk;

muscles of face greatly relaxed. Abdomen still hard, but not tender.

Sept. 28th, 7 a. m. Patient still doing well. Could separate his teeth 7½ lines, and masticate small pieces of cracker. Temp. 37.8, pulse 96.

From this on the patient continued doing well, and could walk across the room with very little assistance on the fifteenth day of medical treatment, viz., Thursday, Oct. 3d. I put him on lactate of iron and cinchonidia, beef tea and light but strengthening diet, and allowed moderate exercise. The hardness of the abdomen soon yielded to an ointment composed of 0.25 grams extract of physostigma venenosum, and 30 grams camphor salve, and Manuel Arrsend will attend his school as usual, as soon as it opens.

GUSTAV KEITZ, M. D.
666 NORTH RAMPART ST.,
NEW ORLEANS, LA., Nov. 4th, 1878.

A case of Alopecia.

During my attendance on a family living near this city, my attention was called to one of the children, who had for years suffered from alopecia, and as it presented some interesting peculiarities, I have thought it worth while to make note of it, with the hope that some of the readers of the JOURNAL AND EXAMINER may throw some light on its cause.

The patient, if I may call her such, is a very bright girl of eleven years of age, exhibiting in all respects the intelligence and characteristics of any healthy child of that age, and was, as her mother informed me, very forward in her studies at school. When between four and five years old her hair, which was very thick, long and curly, and of a dark brown color, commenced to come out in patches all over her head, leaving the head perfectly bald in these places, which varied in size from a kernel of coffee to that of one of the old fashioned pennies. In a little while the hair would be replaced in these spots and her head would look as well as before. This alternate falling out and replacing of the hair occurred, the mother says, two or three times, and finally was followed by the loss of all the hair, which came out gradually, leaving the head perfectly smooth and bald.

At the present time the child's head resembles very much that of a man of seventy years, who became bald before his hair turned gray. Over the ears, and extending from ear to ear around the base of the head there is a slight growth of silvery white hair, varying in length from half an inch to one inch and a half. The crown of the head is perfectly smooth and bald, the hair follicles looking very much as they do when they have become atrophied from old age. At the point where we would look for the posterior fontanelle there exists an oval depression into which the end of the first finger can be placed. There is, however, a perfect floor covering the membranes of the brain at the bottom of this opening, and it seems as if only the inner table of the skull had united, leaving the outer table open. Otherwise the head is perfectly normal. The most singular thing about the case is that there was no apparent cause for the loss of hair. The mother has no recollection of the child's having any fever or other disease previous to or during the time it suffered in this way, and says that she has always been very healthy.

The parents are both healthy, and present no symptoms of specific disease. They have seven other children, all of whom are healthy in every respect, and they can give no information which will explain the cause of this singular attack of alopecia.

S. W. GILLESPIE, M.D.

STERLING, ILL.

[This is evidently a case of alopecia areata, or area Celsi, due to perverted innervation, most often encountered in children, the treatment for which is described in every good treatise on skin diseases.—ED.]

Three Cases of Molluscum Contagiosum.

In the May number of this journal is a paper by Dr. G. H. Fox, of New York, entitled, "A Clinical Study of Molluscum Contagiosum," with a report of twenty-five cases. As it has fallen to my lot to have seen, within a year, three cases of this rather rare complaint, I have thought it worth while to put them on record, especially as two of them exhibited peculiar features.

CASE I. A little girl was brought to the Eye and Ear Infirmary last winter with a single molluscum near one external

canthus. No history of contagion was obtained. It was removed by Prof. Holmes, and the case disappeared from observation.

CASE II. J. M., æt. 41, came to my dispensary clinic last January for advice and treatment. He said that several months before the present visit he noticed several spots about his neck which were tender to the touch, and whose presence annoyed him. Soon there was elevation of the skin, and after a while he noticed at times a discharge from little openings in the elevated patches. Without causing positive pain, there was a constant feeling of discomfort, and the contact of his clothes with the parts seemed to irritate. Upon examination, several flat, sessile tumors were seen scattered about the neck, especially on the sides, varying from 3 m. m. to 3 c. m. in size. About the center of each of the smaller ones was apparently an opening, while the larger presented several openings, from which either protruded or could be easily expressed the characteristic whitish, curdy contents. No specific history could be obtained, nor anything which could throw any light upon the trouble; he was apparently, otherwise, in excellent health.

An ointment of iodine was prescribed, and no prognosis ventured upon. At a subsequent visit the application of iodine seemed to have been of some benefit, and I desired to give it a fair trial before resorting to the knife or cautery. I sought the counsel of Profs. Davis and Andrews, however, and they both recommended final resort to operative measures. I explained this to the patient, but he never reappeared for further treatment.

CASE III. W. J. C., æt. 18, American, applied also, during August, at the dispensary for relief. He presented a very cachectic appearance. He had been under the care of different physicians of the city. He stated that he had had diabetes for about seven months. Examination of the urine confirmed this statement. Said he had lost some 1.5 kilog. within a year. The average amount of urine passed during the 24 hours was about twelve litres. Every winter he has had an itching of the skin, without eruption, unless he scratched himself (urticaria ?), but last winter was annoyed more than usual by this trouble. During last winter, also, wart-like growths appeared scattered

over his legs, and since then have increased in number and size. He had, at time of examination, from fifty to seventy-five of these growths on each leg below the knee, a few on the thighs, and one or two on the neck and chest. They presented the typical appearance, but were rather sessile, of size varying from that of a pea to that of a dime; one or two of them breaking down and forming ulcers. He stated positively that some of them had from time to time disappeared, while other and fresh ones made their appearance. The mollusca were all quite tender, and occasionally painful. In addition to the above, upon examination of the genitals, a marked condition of phimosis was found. Opportunity was not afforded to trace any possible connection between this latter difficulty and the diabetic cachexia. There was no history or indication of syphilis, either hereditary or acquired. He was put on tonic treatment, and circumcision strongly recommended; but the patient declined the latter measure, and disappeared from observation.

It is very unfortunate that these cases could not have been watched and their progress noted, but the mere suggestion of operative relief seemed to frighten them away. Case III. was seen with me by Dr. Hyde, who approved the treatment and recommendations.

By this simple report I have endeavored only to put these cases on record, and have conscientiously avoided saying anything about their pathology. In none of them could it be learned that others of the family or neighbors were similarly affected.

ROSWELL PARK, M. D.

CHICAGO, ILL.

THE HOSPITALS OF PRUSSIA IN 1877. According to the statistical report for 1877, Prussia had 643 public general hospitals, with 27,633 beds; 244 private general hospitals, with 7,906 beds; 53 public insane asylums, with 12,791 beds; 73 private insane asylums; 7 public eye infirmaries, with 167 beds; 25 private eye institutes, with 484 beds; and 31 public and 57 private lying-in hospitals.

Society Reports.

TRANSACTIONS OF THE CHICAGO GYNÆCOLOGICAL SOCIETY.

First regular meeting, October 25th, 1878.

DeLaskie Miller, M. D., in the chair.

Dr. W. H. Byford read a paper on Dermoid Tumors of the Ovary,* of which the following is an abstract:

The paper included the histories of four cases, under the reader's observation, which were unlike in certain particulars. In Case I, an eighteen-year-old girl was tapped, for abdominal distension, in October, 1875; she had noticed her size increasing since the spring of 1874. Ten litres of a clear, slightly-bluish, somewhat tenacious fluid were drawn, which contained the ovarian cell. Ovariotomy was performed Jan. 4, the tumor having rapidly refilled in the meantime. Only a clear serum flowed through a Wells' trochar, but upon being opened, some 250 grams of sebaceous fat was found in the sac. The interior of the cyst was smooth, except at one point where an area as large as one's palm was depressed 2½ ctm. below the neighboring surface, and covered with a crop of brown hair about 2½ ctm. in length.

Case II was that of a woman forty-three years old, mother of one child aged eighteen years. Ovariotomy was done June 28, 1876, ten months after she began to notice an increase in her size. She was as large as a woman at term. The wall of the cyst was thin, except at one point where it contained a thick layer of adipose tissue, and was there 12 m. m. in thickness.

*The reader stated that he had presented the paper at the last meeting of the American Gynæcological Society.

Upon this area grew an abundant quantity of blonde hair, which was matted together in a mass as large as an orange. The hairs were from 16 to 40 ctm. long when straightened. The fluid was a thin serum, in which floated 320 to 380 grams of sebaceous fat, in considerable masses.

Case III was that of a woman thirty-three years old, mother of four children, the youngest aged three years. Ovariotomy was done April 7, 1875, about nine months after the abdomen began to enlarge. The wall of the cyst in three-fourths of its extent was thin; in the remaining portion, including that situated over the pedicle, the wall was made up of dense areolar tissue, which contained many cylindrical pieces of bone, varying in length from 2 to 5 ctm, and from 3 to 5 m. m. in thickness. They were loosely imbedded in the tissue. This loose areolar tissue had a tegumentary covering, to which more than a hundred imperfect incisor teeth were so slightly attached that they could be scraped off with the finger nail. Short, blonde hairs also sprung from this covering, interspersed with the teeth. The cyst contained some 10 litres of fluid, with several grams of yellow, sebaceous, fatty matter.

Case IV, thirty-five years old, mother of four children, the youngest twenty months old. Ovariotomy was performed June 18, 1878. The growth was first noticed nine years before. Upon tapping the cyst, at the operation, nothing but a sticky, greasy matter escaped. The cyst was divided by complete septa into three nearly equal compartments. Each space contained a ball of hair as large as a lemon, in which the fatty matter was intermixed. One ball was of blonde, another of red, and the third of gray hair. The hair on the woman's scalp was dark brown. Some of the hairs were 50 ctm. long, and all sprang from a tegumentary membrane resembling the scalp. By the side of the dermic patch, was a layer of loose areolar tissue, 4 ctm. thick, which contained pieces of bone in a variety of shapes and sizes. Upon this latter area of tissue, in each division of the cyst, was a half arch of teeth, resembling one half of the upper jaw. In one instance, the teeth projected above the surface, but were covered, in the other two spaces, by a thin covering, so soft that it could be removed with the fingers. Each

arch contained an incisor and three molars; two of the latter were shown.

In all these instances there was an absence of adhesions of the tumor with the abdominal walls, and of all other serious complitions. The patients all recovered.

The reader defined a dermoid tumor to be a cyst whose lining was wholly or in part a tegumentary membrane. It may be found in any region of the body. The usual contents of these cysts are the products of the skin: hair, sebaceous fat, and perspiratory fluid. Teeth, bones, muscular, nervous and even brain tissue are also found, but with less frequency. The latter are usually covered by the dermic tissue, or are found beneath that part of the cyst wall not lined by the dermic membrane.

Concerning the origin of these tumors, the reader said that the theories which had been advanced to explain them, in some degree represented the state of physiological science of the period. The explanation which to-day seemed, at least, physiologically plausible, had reference to the early days of the embryo, when, in some manner, an indentation of the external blastodermic layer becomes included in the anomalous situation, and there completes its development with the formation of hair, etc. The reason why these tumors are of greater size in the ovary than elsewhere, may be found in the nervous and vascular activity of which the organ is the seat; and this explains why a dermoid cyst of the ovary is often undiscovered before puberty, when the organ is comparatively inactive.

Discussion.

Dr. Jackson said he trusted that this society would never become one of mutual admiration. Its objects were of a much higher character—the principal one being the mutual benefit of its members. He mentioned this in order that he might not be misunderstood when he said that he felt himself fortunate in having the privilege of listening to the really excellent paper of Dr. Byford. He confessed that it had given him a clearer understanding of the subject of dermoid tumors than he had ever had before. The paper was very remarkable in many respects. Dr. Byford had been unusually fortunate in having the opportunity

of seeing and treating so many as four cases of this really rare disease. Spencer Wells, in 500 cases of ovariotomy, had found that only nine of the tumors removed were of the dermoid variety; Atlee, in 400 cases, found six; and in a table given by Peaslee of 61 cases, only one was dermoid. Taking these as a basis for calculating, the percentage of dermoid tumors to other tumors of the ovary, was not more than 1½ or 2. As Dr. Byford's opportunities had been great, so also had he made the very best use of them. But the mysteries surrounding the subject had not by any means been cleared up. One of them related to the extraordinary number of teeth sometimes found in these tumors. Schnabel, quoted by Wells, instances a girl aged 13, in whom was an ovarian cyst of large size, containing three pieces of bone and more than 100 teeth; Paget also mentions a case in which the cyst contained over 300 teeth. How can this be accounted for? If the teeth are produced from bone in the ordinary manner, how is it that these pathological specimens in which are found only small pieces of bone and patches of tegumentary tissue, can produce so many more teeth—some well developed—than are found normally? And what is the explanation of the fact that the hairs found in dermoid ovarian cysts are so frequently found in the form of masses or balls? He would like to inquire whether, when on tapping a cyst we found the whole or a portion of the fluid removed become of the consistence of butter, we could be safe in assuming that the tumor was of the dermoid character.

DR. NELSON: The theory proposed to account for the formation of dermoid tumors certainly seems a reasonable one, if we remember the number of organs or parts of organs normally formed by involution of the blastodermic cells, as, for example, the crystalline lens of the eye, from the epithelial cells of the skin; the enamel of the teeth, from the same cells which form the epithelium of the mucous membrane of the mouth; the hairs and the glands of the skin from the same cells which form the epidermis; and especially the Graafian follicles of the ovary from the same cells which cover the peritoneum. If we remember also the numerous grooves and folds, fissures and processes formed in the blastodermic membranes during the development of

the face, we need not be surprised to find this region a frequent seat of dermoid cysts. And especially will the development of the Wolffian bodies and their successors, the ovaries and testes, account for the frequent location of these tumors in this region. The Wolffian body is developed from cells in the middle blastodermic layer, just beneath the external blastodermic layer, which finally forms the skin and its appendages. It then descends toward the peritoneal cavity, carrying with it the external blastodermic layer sufficiently to form a groove, and thus aid in forming the Wolffian ridge from which the lower limbs are to be finally developed. This possibly accounts for the finding of these tumors occasionally in the thigh, the involution having really occurred at the Wolffian body and been carried downward in the wonderful development of the lower extremities at this period, instead of following the Wolffian body to the region of the testis, ovary or kidney. So we may consider these dermoid tumors a kind of complement to that other freak—cleft palate and hare-lip—the one a deficiency of blastodermic development and the other an excess.

DR. MERRIMAN thought Dr. Byford's method of bringing out these theories was very interesting; so also was the fact to which he called attention, that "these theories represent with some degree of exactness the physiology of the times in which they originated." The *scientific theory* given, certainly best explains the development of these strange cysts; but many puzzling facts are left unaccounted for, even in this theory. For example, it would naturally be expected that if the blastoderm had a definite constructive duty to perform, and a part of the membrane should be shut off from work with the rest, then the remainder would do an incomplete work, and the fœtus would be deficient in some respects. Or, on the other hand, if so small an amount of the blastoderm is included in the cyst that its loss is not missed in the construction of the fœtus, why then is there found in these cysts such immense development of some tissue which is generally supposed to be produced in the human body *only within a certain definite limit.* For instance, he was present at one of Dr. Byford's operations—not mentioned in this paper—when he found nearly a hundred teeth, more or less perfect, imbedded in

the walls of the cyst. Dr. Byford will remember the case. Why should that trifling indentation in the blastoderm produce larger quantities of this tissue than is produced by the whole blastoderm in the fully developed body. These things are an enigma.

DR. SAWYER: I do not presume to be able to add to the stock of knowledge which has been laid before the society in the paper just read. I only desire to remark that the differentiation of a dermoid tumor from those tumors which are known as monstrosities by inclusion, cannot, in all instances, be established. Many instances of the latter forms of tumor have become historical: notably the case of the man in France, who bore a large tumor of the scrotum. Coming under the observation of Velpeau, this remarkable diagnostician exclaimed, in a manner characteristic of his race, "My friends, that tumor is the man's brother," which, in fact, it proved to be. A second instance is that of the Chinese, from the anterior surface of whose thorax a second child sprouted; at birth this was as large as the first. A cast of this monstrosity, which is preserved in the Warren museum, at Harvard, represents this second child as having leaped into the thorax of the first. A third remarkable instance occurred to Dr. Joseph Pancoast, of Philadelphia, who removed a cystic tumor from the cheek of a very young child. The cyst contained a monster which, at the time of its removal, was growing faster than the independent child.

Monstrosities of this kind are usually regarded as quite distinct from the tumors described in the paper. The presumed point of departure being, for the subject of a dermoid tumor, that some portion of the individual's own external blastoderm has descended into, and been included, and shut off in some one of the numerous fissures which are found in the early embryo; while in a monster by inclusion, the entire or a portion of a neighboring embryo has been in a similar manner imprisoned in an embryonic fissure.

It is a curious and, perhaps, significant fact, that in these imprisoned monsters there is a tendency to an exaggerated development of the hairy portions of the integument and of the teeth. The cyst in Pancoast's case also contained much fatty matter. These and other facts have led Dr. Atlee, in his work, to describe

monsters by inclusion in the same chapter with dermoid tumors. For the same reasons, other observers have thought it proper to look upon all dermoid tumors as instances of monstrosity by inclusion.

DR. EARLE said in regard to the accepted theory of the formation of these tumors, that it was exceedingly difficult for him to understand one step in the process. If these growths are the result of a depression of the blastoderm, which is finally severed from its proper place of development, how and why is it that in nearly *every case* this depressed portion is from that part of the blastoderm upon which teeth and hair especially are developed? Or, if this depressed portion is not from the same part of the blastoderm, shall we conclude that any depressed part of this membrane which is cut off from its proper place of growth has a tendency to develop teeth and hair?

DR. MILLER: I have been much interested in the paper read this evening. The history of the cases is instructive, and the deductions are ingenious. There are some points, however, relating to the genesis of dermoid cysts, which still remain occult. Would it not be pertinent to raise the query, whether dermoid tumors originate only by the inclusion of a portion of the blastoderm proper to the embryo? This theory may be accepted as a reasonable explanation of the origin of some.

There appears to me good reasons for believing that an embryo in the early stages of development may include another ovum, the development of which continues only for a limited period, and it may thus furnish the characteristic contents of a dermoid tumor. In the retrograde metamorphosis that ensues, it would be natural for the softer tissues to yield first to the changes, and the more resisting structures, such as teeth, bone, hair, nerve, etc., to remain. It is no disparagement to confess that much of our knowledge upon this subject is hypothetical.

DR. BYFORD, in rising to close the conversation on his paper, said that he felt highly complimented at the manner it was received, and felt justified in reciprocating the encomium conferred upon it by expressing his satisfaction at the intelligence with which the members had criticised this abstruse subject. He acknowledged, in response to Dr. Jackson's remarks, that

although the theory he had adopted was the most satisfactory in the present light we had, many of the minor points connected with the structure of these tumors could not be explained. Why there was so great a redundancy of teeth for so small a space and matrix for development, he could not say. He thought, however, the matted condition of the hair could be easily explained. The hair is matted, not rolled together, and each hair may be straightened out by simply taking hold and drawing it up. When we remember that while the hair is growing the fat is being secreted and entangling it, and thus preventing it from assuming any other than a matted condition, the explanation becomes evident. He would not hesitate to pronounce a tumor dermoid from which a fat flowed, at first fluid, and afterwards became solidified. At least he had always found this coincidence to be true evidence in favor of that sort of tumor.

Dr. Nelson has elaborated the theory from the standpoint occupied by the physiologist, in a manner that gave him great satisfaction. The remarks in this connection, he thought, must be accepted by the society as reasonable, and in accordance with the teachings of that branch of our science to which he has devoted himself.

In reference to what Dr. Sawyer said of monstrosities by inclusion, Dr. Byford believed that there might in certain cases be great difficulty in distinguishing between dermoid tumors and these engulfed monsters, during the life of the patient, and before they were removed, especially in the cavities of the body, or even when situated externally. He thought, however, that after the tumor had been removed, either during the life of the patient or *post mortem*, a careful inspection of its contents would remove all doubt as to its nature. In monstrosities by inclusion, the bones of the skeleton were sufficiently developed in shape and placed in their proper relation to admit of no doubt of their identity. The best instance of this description of heterotopy he remembered to have seen is to be found in Dr. Atlee's work on "Diagnosis of Ovarian Tumors." The dissection was made by Dr. Grant, and represented a fœtus so correctly that it would readily be recognized. In dermoid tumors, however, none of the bones are developed into unmistakable examples of femurs,

humerus, maxilla or other bones in the skeleton. No development from the middle or inner layer of the blastoderm was complete, while some of the products of the external, or dermoid lamina were sometimes anatomically perfect, as the skin, hair and teeth.

It would not be strange to find, and probably if the possibility was borne in mind in making the investigation there would generally be found a continuation of the two, as the blastoderm of the including individual would be depressed at the point where the included ovum had been engulfed. There might, therefore, be a redundancy of hair, teeth and sebaceous fat produced by the dermic tissue, lining the cavity which accommodates the included fœtus.

In conclusion, the Doctor thanked the society for the interest manifested in his paper.

MICHIGAN STATE BOARD OF HEALTH.

(Reported for the Chicago Medical Journal & Examiner.)

The regular quarterly meeting was held in the office of the Secretary of State, at Lansing, Tuesday, Oct. 8, all the members being present, as follows: R. C. Kedzie, M. D., Prest., of Lansing; H. O. Hitchcock, M. D., of Kalamazoo; Henry F. Lyster, M. D., of Detroit; Hon. LeRoy Parker, of Flint; Rev. D. C. Jacokes, of Pontiac; and Henry B. Baker, secretary, of Lansing.

Rev. D. C. Jacokes, committee on buildings, heating, ventilation, etc, mentioned experiments in progress with regard to a plan of ventilation applicable to houses already built, on which he should be able to report at the next meeting. He had given illustrated lectures in a town in this State, and secured the construction of a chimney with ventilating flue, as recommended by Dr. Kedzie in the first annual report of the board, in a church where patent ventilating machines had failed; and the same plan would also be tried in private houses in that town. In this way he hoped to secure practical methods of ventilation "for the million." He had visited a house so constructed and shaded that

scarcely a ray of direct sunlight could enter, and in which seven of eight children had died. He had visited, by authority of the board, several large ecclesiastical gatherings, and spoken on subjects connected with the work of this board, and through them had distributed important documents to all parts of the State.

Dr. Lyster, committee on climate, presented the introduction of a paper on the topography and climate of Michigan, illustrated with diagrams showing isothermal lines, rainfall, elevation of localities, distribution of woodland, frequency of storms, etc. It is to be completed for publication in the annual report.

Hon. LeRoy Parker, committee on legislation for public health, read a paper on coroners and coroners' juries, showing the former dignity of the office of coroner, and stating that the jury were originally summoned principally as witnesses. He traced the growth of the system of coroners' juries, showing the origin of some abuses and the extent to which the system has been degraded, and clearly exhibited the need for expert medical ability on the part of the coroner in tracing to their causes deaths from violence and accident, and for expert legal ability in dealing with cases of homicide, suicide and murder. He recommended that the coroner's jury as now constituted be abolished, as has already been done in Massachusetts; and that efforts be made to secure as coroners men of expert medical and legal ability. He stated that the system now in force in Massachusetts was considered far superior to the old system.

Dr. Lyster spoke of some of the evils of the present system, and the importance and need of the proposed reform.

Dr. Baker read a report of public health subjects in the proceedings of the Michigan State Medical Society, at its meeting in Lansing in May last, which was ordered published in the annual report.

The secretary reported further correspondence relative to the sanitary convention proposed to be held at Coldwater in February, 1879; also, correspondence with makers of sanitary appliances, relative to exhibiting their inventions at these conventions. He exhibited Wheeler's disinfector (invented by W. F. Wheeler, 119 S. Fourth st., Phila., Pa.) for rendering the water supplied to urinals, water-closets, etc., itself a disinfectant, by means of car-

bolic soap; also, Houghton's reversible charcoal water-filter, designed to be attached to water-pipes at the point of delivery, which had been obtained for the same purpose from the agent, E. C. Houghton, 75 Devonshire street, Boston. The secretary presented the usual report of work in the office during the last quarter. Circulars have been sent to the clerks of cities and villages who have not made the return of health officers as required by law; copies of the vital statistics of Michigan and of the last report of the State Board of Health have been distributed to sanitarians, sanitary exchanges of the board, and others engaged in sanitary work in the State; 20,000 copies of the document on restriction and prevention of diphtheria have been printed and are being distributed; replies of correspondents relative to diseases of 1877 have been compiled for the annual report; other manuscripts have been prepared for the report of the board for 1878, and the president's address and a few other articles have been printed. The annual inventory of property purchased, issued, used, and on hand, has been made. The meteorological registers supplied by the observers of the board for the year 1877 have been compiled as a basis for an article on the "Principal Meteorological Conditions of the Year." The report concerning the property of the board showed an addition to the library by gift, exchange or purchase, of 258 volumes, mostly bound.

A motion was passed directing a complete set of meteorological observations to be taken in the office of the secretary.

A motion was also passed directing that the document upon the restriction and prevention of diphtheria, recently issued by the board, be electrotyped for use by local boards of health and others interested in the restriction of the disease.

Dr. Lyster presented a communication from a dentist of Detroit, relative to the preservation and care of the teeth, which was read and discussed.

The secretary presented a communication from Dr. O. Marshall, of North Lansing, relative to opium-eating and the opium habit, which included a summary of replies by 96 prominent physicians in Michigan to a circular of inquiry as to the number of opium and morphine-eaters of both sexes in their

localities. There were reported from these places, mostly villages and smaller cities, 1,313 habitual eaters of the drug. It also included a statement from the United States treasury department, showing that there have been imported during the 27 years from 1850 to 1877, 5,299,774 lbs. of opium, valued at $26,142,085, besides 22,565 oz. of morphine, valued at $73,433, imported during the 17 years from 1861 to 1877; also, showing that the imports for the ten years ending with 1877 exceed by 2,057,080 lbs., or nearly 200 per cent., the imports for the ten years ending with 1859. In addition, it is believed that there has been at least 10 per cent. of the amount above stated smuggled into the country. The estimates for Michigan based on these replies and the statements of a wholesale drug-house in Detroit show the consumption of opium to be very large.

The secretary read a communication from Dr. Topping, of Dewitt, based on recent experiences in an epidemic of diphtheria, in which he reversed a former report that he had seen no evidences of the contagiousness of the disease, having lately traced about 70 cases to one first case. Also, two communications from Dr. J. S. Caulkins, of Thornville, relative to the period of incubation in diphtheria, based on a study of nine cases in one family, six of which were fatal, and eight cases in another family, four of which were fatal.

A resolution was adopted, directing the committee on legislation to prepare a memorial to the legislature in favor of a topographical survey of the whole State for sanitary purposes, to be instituted at once and carried forward to its earliest completion.

Dr. Baker was appointed a committee to confer with the representatives of the American Public Health Association, American Social Science Association, and others, relative to devising some method for uniform registration of births, marriages and deaths, throughout the United States.

After the auditing of bills, and a large amount of routine business, the board adjourned to meet Jan. 7, 1879.

Foreign Correspondence.

CLINICAL NOTES FROM PRAGUE AND BERLIN.

It is strange that the farther one gets from the source of the Lister method of antiseptic surgery, the more firmly the profession believe in its efficacy. Mr. Spence, Mr. Lister's former colleague in Edinburgh, is one of the bitterest opponents of the system that I have ever heard upon the subject. In the performance of an amputation at the hip joint, I was surprised to see him using the spray, after what I had heard him say in opposition to, and almost in ridicule of the whole system.

His explanation was that he did so in deference to a public sentiment in its favor, as the operation was one of the most dangerous known to surgery.

The patient recovered and the advocates of the carbolized spray asserted that it was the only case of the kind that Mr. Spence had operated upon successfully for many years. In London, fifteen months ago, most of the surgeons did not use the spray in their operations. In Vienna it is generally used, though often very imperfectly. In Prague the system is carried out in all its details. They even sent an assistant to London, the past winter, to learn from Mr. Lister himself all the minutiæ of the process.

While in Prague, I spent most of my time in the surgical and gynæcological wards.

Cæsarean Section.

Prof. Breisky, of this city, has lately done this operation by the new method of removing the entire uterus, after the manner which I described in a former letter as done by Carl Braun, of Vienna. Prof. Breisky tells me that this is the seventeenth

Cæsarean section that has been done here in Prague during the last 35 years, and that this is the only patient who has recovered. The operation was done strictly antiseptically.

I saw the stump dressed frequently, and the most scrupulous care was used to prevent its being exposed for a moment to the air without the application of the spray.

Prof. Breisky remarked that the procedure was rather expensive for a pauper patient, as the dressings had cost $20 for the first two weeks.

I asked the doctor what he thought of Prof. Thoma's new method of doing this operation. His reply was that with the favorable results obtained by this mode of operating, he thought that any other plan was absolutely criminal.

EMMET'S OPERATION,

as it is called here, of paring the edges of the cervix uteri where it has been torn during labor, and bringing the parts together by means of silver wire sutures, Prof. Breisky has done thirty-two times during the last eighteen months. He tells me that the benefits that are supposed to be derived from the operation by its advocates are, in his opinion, greatly over-estimated. He finds, from an extensive observation of cases, that many women who have laceration of the muscular fibers of the cervix uteri have none of the morbid symptoms which this operation is supposed to remedy: and that, furthermore, few of the cases upon which he operated were benefited further than could be accounted for by their necessary confinement in bed, and the inflammatory reaction that must follow after so considerable an operation.

PARAMETRITIS.

In the treatment of this affection, Prof. Breisky's idea is to begin early, and vigorously combat the tendency to the formation of pus. To fulfill this indication, he uses the tincture of iodine, applying it not only to the pelvic walls outside, but, putting the vaginal walls well upon the stretch with a bivalvular speculum, he applies the remedy high up on the vaginal mucous surface, as strong as can be borne by the patient. He makes the applications twice in the twenty-four hours.

Erysipelas.

In the surgical wards in Prague, a paste composed of equal parts of tar and alcohol is the only remedy used locally in the treatment of this disease. It is spread upon a cloth large enough to cover the surface affected, and to extend a short distance on to the healthy skin. The applications are only changed when they become dry, as it is considered desirable not to expose the parts to the air any oftener than is absolutely necessary. They give at the same time internally one gram of quinia in the twenty-four hours, divided into four doses.

The tincture of the chloride of iron, which is so generally given for this disease in America, and which Prof. Gross taught me, fifteen years ago, was an absolute specific if given in sufficiently heroic doses, I have not found used at all in the wards of any of the hospitals that I have visited in Europe.

Dr. Goldthammer, of the Bethanien hospital at Berlin, applies locally a three per cent. carbolized olive oil. He covers the parts thickly with this mixture, and then envelops them with a heavy layer of sheet wadding, and does not change the dressing oftener than once in the twenty-four hours. He gives nothing internally but wine and a generous diet, being careful at the same time that the patient has plenty of fresh air.

In Prof. Frerich's wards in the Charité, in Berlin, I saw a number of cases of erysipelas and observed closely his manner of treating them. Among them, was a robust girl aged 22 years, who had the disease in a very severe form. Prof. Frerich made her case the subject of a clinical lecture.

"This," he said, "gentlemen, is a case of diffused erysipelas, and is one of the most troublesome and unsatisfactory diseases that we have to treat. She has now been in the hospital eight days. The eruption, which began on her face, has gradually run down until it has now reached the middle of her thighs, and when it has run out at the ends of her toes, it may light up again where it first began, and traverse the whole body a second and even a third time.

"During two days of this time her temperature fell to the normal standard, but this morning it is 40.20. It is one of the dis-

eases in which the temperature curves are governed by no known laws. To-morrow it may be normal, or it may even exceed that which we have to-day.

"It would consume an entire hour, if I should attempt to give you even a catalogue of the different remedies, local and constitional, that have been brought forward and highly extolled in the treatment of this disease, during the forty years of my professional life; but as they have each proved absolutely worthless in my hands, I will not burden you with their enumeration, further than to remark that all *irritating substances*, such as the tincture of iodine, the nitrate of silver, and the like, applied with a view to limiting the spread of the disease, are worse than *useless*, they are absolutely *hurtful*, for while they entirely fail to fulfill the indication for which they are applied, they add to an already existing inflammatory condition of the skin.

"The last plan of treatment that has been brought to our notice was claimed to be founded on something more than simple empiricism. The disease, as was asserted, being produced by the impregnation of the cuticle with certain bacteria, we had only to resort to that great destroyer of the lower forms of animal life, carbolic acid, to effectually arrest its progress.

"We were told that the hypodermic injection of this remedy upon the borders of and just beyond the confines of the eruption would completely head off the disease in its onward march. In my wards here in the Charité we have tried this plan of treatment most effectually, and I can assure you that we have not only found it of no use, but absolutely, and often to a high degree, *injurious*. It has no effect at all in arresting the spread of the disease; besides, we have had cases where abscesses have followed its use that were troublesome to manage, and highly prejudicial to our patients.

"If we are to discard all these new and old plans of treatment, then what are we to do? Unburden your minds of all specific remedies, and treat your case symptomatically entirely. If this patient cannot sleep, we will give her opium or chloral, whichever seems best fitted to fulfill the indication in her particular case. When her temperature is down, and she appears exhausted

from the previously existing hyper-pyrexia, we will give her wine, camphor and the like.

"As her temperature is very high at present, we shall prescribe for her to-day 1 gram of quinia to be divided into three doses, one to be given every eight hours. Besides this we are using cold baths of a temperature of from 18° to 24°, repeated from two to six times a day, according to the temperature that we have to combat.

"We are keeping the parts that are the seat of the most active stage of the disease constantly enveloped in cold compresses, from water of a temperature of from 10° to 16°, and this is all we are doing, or shall do."

I watched this patient every day, after the above lecture was given, while she remained in the ward. The disease did not entirely disappear until the fifteenth day after she entered the hospital. On the 10th day her temperature was normal for twelve hours, and on the 12th day she had no fever for the same length of time, but after each intermission she had an exacerbation in which her temperature rose to above 40°.

VOLVULUS.

Mrs. E., a married woman, aged 43 years, suffering from complete obstruction of the bowels, was brought into the lecture-room and her case made the subject of some clinical remarks by Prof. Frerichs. She had had no evacuation from her bowels for twelve days, was bathed in a cold perspiration, her countenance expressed extreme suffering, her whole aspect seeming to portend a speedy dissolution. She vomited everything she took into her stomach, and the matters ejected were frequently mixed with stercoraceous ingredients. Prof. Frerichs said:

"Gentlemen, the first question that presents itself in connection with this case, is the location of the obstruction; and the second point for consideration is its character. As we look at her abdomen and observe the irregular peristaltic contractions that take place, we see that they are mainly confined to the central portion of the bowels, near and around the umbilicus.

"As we follow around the course of the colon, we find this portion of the intestinal track undistended and comparatively

free from any unnatural movement. This leads us to infer that the obstruction is in the small intestines, probably in the jejunum. Now as to its nature. Upon this point we shall have to speak with some reserve.

"What do her symptoms lead us to infer? We have not been able to find any circumscribed hard mass or tumor, even by the most careful external exploration. We therefore exclude both hardened fæces and gall stones as the cause of obstruction in this case. Our next most frequent cause of an acute attack like this, is either intussusception or a twisting of the gut upon itself. We believe the cause of the difficulty in this case, to be due to one of the last two conditions, but to which of these conditions we are unable to say.

"Of course we would not think of giving a patient like this a cathartic. If we were *certain* that we had intussussception, we would give an opiate, to quiet all peristaltic contractions of the intestines; but as this remedy would be contraindicated if we have simply a twisting of the gut upon itself, we shall discard this remedy also.

"We shall use for this patient ice and ice water, and these alone. By means of a Hegar irrigator we shall throw as much ice water into the bowels, per rectum, as we can possibly do without fear of their over distention. We have used in this case two litres of water at each irrigation, and have repeated this every 4 to 6 hours. We give her by the mouth all the ice that she can eat, and nothing else."

From the general aspect of this patient I had scarcely a doubt but that she would soon die, and so I watched the autopsies at Prof. Virchow's pathological rooms for two days, expecting to be able to see the diagnosis in her case cleared up by a post-mortem, but as she did not make her appearance, I went in search of her, to the ward in which was her bed, on the third day, and found to my surprise that she was sitting up in bed, eating a plate of soup, and was convalescing nicely.

Fractures of the Femur.

After observing the animated discussions that have lately occurred on the other side of the Atlantic, between Prof. Sayre on

the one hand and Prof. Frank Hamilton on the other, as to the possiblity of obtaining perfect results in the treatment of fractures of the femur, I have been lead to carefully watch the management of this accident in the hospitals in Europe, not only as to the mechanical appliances used, but also as to the results said to be obtained. Although the limits of this article will not allow me to go extensively into a review of this very important question, yet I will give the followig brief summary of what I have observed.

The first point that strikes me as a deviation from what is so stringently taught by most of our surgeons, is that there are *generally* no active measures used to produce extension and counter-extension in the management of these cases. Buck's extension apparatus (or the American method, as it is called here) is used very infrequently indeed. The surgeons in St. George's Hospital in London are the only ones whom I have found who use it *generally*, and they only do so when the fracture is very oblique and the shortening very considerable. When I have asked surgeons why they did not adopt this simple means in the treatment of this accident, they have generally found fault with it on two accounts; first, its inconvenience to the patient by producing pain, etc., and the liability of non-union following its use if the weight used was very heavy. The appliances that are used in the treatment of this accident are almost as numerous as the men who treat it; yet they very generally fail in the one thing that is considered needful with us, and that is, in producing any considerable extension and counter-extension.

At the Bethanien Hospital, in Berlin, I saw a number of cases of this kind being treated, and I got some items that would delight Prof. Hamilton, and furnish him with some valuable paragraphs for the next edition of his work on fractures and dislocations.

Prof. Wilms says that he tried effectually the application of the plaster of Paris dressing with a view of keeping up counter-extension in the perineum; and that whenever he effected this object, it was at the expense of great suffering and inconvenience to his patients, and that in several instances it produced exten-

sive sloughing in this region. He, however, uses the plaster of Paris dressing, not extending it *internally* sufficiently high to press upon the perineum, but carrying it up on the outward aspect of the limb as high as the crest of the ilium, extending the bandage around the entire pelvis, but not applying the *plaster* except to the outward aspect of the dressing. He further says that extension and counter-extension are *generally* not necessary in the treatment of these fractures; that the main point is to *adjust* your fracture *well*, and then keep the parts quiet. To effect this object, he anæsthetises his patients with chloroform before he attempts to adjust the parts. This, he claims, takes off all muscular spasm, and enables him to do his work well. He applies his bandage under the influence of the anæsthetic, an assistant keeping up extension until the bandage dries sufficiently to be firmly set. To facilitate the rapid drying of the dressing, he mixes his plaster of Paris in hot water.

Prof. Wilms says that his results are good, and when I asked him how good, he said that the shortening was generally under one inch.

In the cases I saw treated in Prof. Langenbeck's clinic, the plaster dressing was only applied as high as the hip joint, the perineum not being pressed upon. A long, external, wooden, straight splint extended from above the pelvis the whole length of the limb, to which was attached a foot piece to keep the foot from rotating, and was used in addition to the plaster bandage.

I shall speak in a future article of the ingenious manner in which the plaster of Paris dressings are used in the hospitals in Paris.

W. S. CALDWELL.

PARIS, October 29, 1878.

HIGH TEMPERATURE—Mr. Searle, of Scarborough, recently brought before the Clinical Society of London a case in which the temperature reached 50° C. (122° F.), and yet the patient recovered.

Editorial.

VALEDICTORY OF THE YEAR.

The third year of publication of this journal, since the organization of the Medical Press Association, is completed with the issue of this number. It has been, in every respect, the most successful and satisfactory of all the years that have passed since the issue of the first number in 1844.

This journal, when it ceased to be the organ of any medical school or set of medical men, entered upon a career of usefulness which could hardly have been anticipated. The only rivalry between physicians and between medical colleges which these pages have evinced under the present management, has been an honorable rivalry between contributors respecting the worth and value of their communications. Here have appeared, side by side, the papers of authors which, but a few years ago, would have seen the light only in medical periodicals of limited circulation and discordant interests. This happy and wholesome association has served to divorce medical politics from medical literature in Chicago, and has contributed to a cordial understanding between professional gentlemen of this city, which, by the liberal minded among them, is highly appreciated.

But the influence of this journal has been more widely felt. From the position of a provincial publication, it has advanced to become one of the national exponents of medicine in America. Its foreign exchanges, reaching hither from every quarter of the globe, reproduce, with each month, an increasingly large number of original papers which were here first published. Its editorial articles have been copied and quoted in all parts of the Union. Its foreign correspondence has been re-published, on many occa

sions, with favorable comments, on this side of the Atlantic. Unsolicited endorsements of its high character and standing have appeared in the medical publications of Great Britain, France and Germany.

With this enlargement in its aim and scope, the list of its subscribers has not only increased, but extended so as to include the residents in the most distant parts of the country. An edition is now distributed from California to Maine, and from Canada to Louisiana. As might naturally be expected from such a circulation, our list of contributors is no longer limited to the body of practitioners who have settled in the Northwest. The physicians of Massachusetts, New York and Maryland, as well as those of Wisconsin, Iowa, Minnesota, Indiana and Illinois, have aided in spreading before our readers the results of scientific thought and labor. In consequence of all this, we have to announce that during the year now completed, the publishers have been enabled to expend a large sum upon the management of the journal, which represents the surplus of its receipts over and above the amount of its necessary expense.

For these results the editors are well aware that they are indebted, less to their efforts than to the excellence of the contributions of correspondents, authors and collaborateurs. To all such they extend their congratulations and thanks, in the hope that during the year to come they may look to the same and other sources for even better results. For themselves, they engage that no efforts shall be spared to still further enlarge the scope and usefulness of the CHICAGO MEDICAL JOURNAL AND EXAMINER.

No more important change has been made in the conduct of this journal during the past year, than the adoption of the metric system in its pages. In this important movement, we took a step in advance of all the other medical publications in this country. It is a step for which we have received much credit and many congratulations — a step which we have never had occasion to regret. Without urging any physician to make abrupt changes in his mode of prescribing, we thought that a wise and useful measure, which would gradually make our readers and correspondents familiar with the system, at least in its written forms. It cannot be doubted that metric measures, already

extensively employed among scientists of all nations, legalized by act of congress, and urgently recommended to the profession of this country by its national association, will eventually be used, at least by physicians and druggists, to the exclusion of all other standards. In anticipation of this desirable end, the JOURNAL AND EXAMINER is content if its pages shall contribute to the result by their monthly exposition of the nomenclature, meaning and value of the terms of the metric system of weights and measures.

For the CHICAGO MEDICAL JOURNAL AND EXAMINER, the retrospect of the past year is therefore a review of its successes; its future is assuredly full of promise. In that future it shall not fail to contribute its share to the work of elevating the standards of medical education, diffusing a knowledge of the results of scientific research the world over, and supporting all measures which look to the advancement of the best interests of the medical profession.

TO OUR SUBSCRIBERS.

As the present subscription of many of our readers will terminate with this number, we wish to call their attention to the fact that in order to make the journal most effective for benefiting the profession, it is absolutely necessary to keep it on a sound financial basis, and the experience of medical journals the world over shows that it is impossible to do this without making subscriptions payable in advance. We, therefore, urge our patrons to send in their renewals before our next mailing day, in order to insure the uninterrupted receipt of their journals. We always receipt promptly; therefore, if any one does not hear from his remittance within ten days, he may fairly suppose it has gone astray, and he should write us immediately, giving date of remittance, etc.

We have made arrangements which, we think, will be for the advantage of those of our subscribers who wish their journals bound, or who may desire to purchase medical books. For particulars, please read our notice among the advertising sheets.

Reviews and Book Notices.

THE LAW OF POPULATION—ITS CONSEQUENCES AND ITS BEARING UPON HUMAN CONDUCT AND MORALS. By Annie Besant. Authorized American from the 25th thousand, English Edition.

This is one of the issues of what may be most fittingly termed the *pseudo-philanthropical press.* Commencing with a statement of the Malthusian doctrines concerning the disproportionate ratios of increase of the earth's population and the production of food, it is made clearly apparent that in certain countries the population is becoming too great for the supply of food. This approach to starvation of the masses continually grows worse instead of better. Consequently it is desirable in densely crowded communities to do something to limit the propagation of the species, if we would obviate the tendency to increasing misery.

The author then reviews the evils which grow out of an attempt to limit population by postponement of wedlock till a late period of life. This course leads inevitably to prostitution of great numbers of women, and spreads disease and immorality in every direction. This method, therefore, is pronounced a failure.

So far there is no fault to be found with the essay. It reads like the work of a true philanthropist. But now comes the descent from the sublime to the ridiculous Artificial interference with the results of copulation is announced as the true way of getting around all these frightful difficulties which render the human race a burden to itself. A soft sponge in the vagina of every wedded wife—and no woman hereafter need go unwedded through fear of offspring—is the unfailing panacea which shall keep the balance true between mouths and food! No other method is considered by our author equal to this!! I am not

sure but it is a sufficient criticism to say that for the publication of this opinion the authoress was sentenced by a court of law, in that very land which she desired to relieve, to pay a heavy fine and to suffer a limited term of imprisonment. Evidently the morality of such philanthropy is not very highly esteemed.

It is not, however, with the morality of these expedients that we have to do. What shall we say of them when viewed from the stand-point of the physician? Upon this subject, the testimony of gynæcologists is uniform, to the effect that such methods infallibly lead to uterine disease. This should be sufficient to condemn the practice. If we are to resort to art for relief in these matters, let us be consistent and thorough. Let us have some more sanitary laws and some more sanitary officials, to regulate our lives. It is an open question whether the practice of spaying would not be preferable to such nuisances as the advice of this pamphlet would create. When our sexual relations have been thus perfected and re-adjusted to the wants of *civilization*, we shall have a lesson in the results of pin-hole philanthropy at which angels—if not men—will stand aghast.

Man is a fine animal as he stands; but if he is to be improved in any respect we must be content to work with instead of against Nature. I cannot but think that it would be well for these agitators, who so greatly desire to improve upon the relations which exist between the sexes, to imbibe a little of the wholesome spirit displayed by Miss Polly Baker, when she was arraigned before the judges, in the good old times, to answer for the birth of a fifth illegitimate child. She addressed the court (so runs the ancient chronicle) to the following effect:

"She acknowledges the fact; says that twice she paid the fines imposed, and twice was punished for lack of means with which to pay the fines; thinks all this may be in accordance with the law, but argues on the unreasonableness of the law which punishes her, who at the risk of her life, has brought five children into the world, maintained them well by her own industry without burdening the township, and fitted them to become good subjects of the king; that she has wronged no one, unless it be the minister or justice, by reason of their having missed a marriage fee; that she would have much preferred to be married, never

having refused an offer of marriage, but on the contrary, accepting the first one she had, and the result was she unhappily lost her own honor while trusting too much to *his;* that she had been most severely punished, while he had been raised to an office of honor and profit, being, in fact, one of the judges in that very court in which she was being tried, but not upon that occasion present. She reminds the court that, according to their belief, she has offended heaven and must suffer eternal fire, and urges if that is not sufficient punishment without their intervention; at the same time declares her unbelief in such doctrines as that Heaven is angry at her having children, when to the little she had done toward it God had been pleased to add his divine skill and admirable workmanship in the formation of their bodies, and crowned it by furnishing them with rational and immortal souls. She further urges that if men must be eternally making laws, they ought at least to leave alone the natural and useful actions of men, and not by their prohibitions to turn such actions into crimes. They ought to punish the bachelors, who do nothing to populate the country, but leave unproduced (which is little better than murder) hundreds of their own posterity, while young women are most severely punished for obeying the first great command of nature and of nature's God, to increase and multiply—a duty from the steady performance of which nothing has been able to deter her; and that the court, instead of punishing her, ought to erect a statue to her memory."

It is also recorded that one of the judges married her the next day, and she had fifteen more children.

Verily, if we must choose between Miss Baker on the one hand and Mrs. Besant with her sponges on the other, give us Miss Baker every time, and the bread and butter question will surely take care of itself. H. M. L.

INSANITY IN ANCIENT AND MODERN LIFE, WITH CHAPTERS ON ITS PREVENTION. By Daniel Hoek Tuke, F. R. C. P., Lond. London: MacMillan & Co. Chicago: Jansen, McClurg & Co,, 1878; cloth pp. 226, $1.75.

Dr. Tuke, the author of the present volume, is already favorably known to the profession by his admirable treatise entitled,

"Illustrations of the Influence of the Mind upon the Body," and by his joint authorship with Dr. Bucknill of the best work on Psychological Medicine in the English language. The present, like the former publication, shows earnest, patient and laborious research and a capacity to draw judicious conclusions from materials collected.

The book is divided into three parts.

Part first considers the prevalence of the causes of insanity among the nations of Antiquity. He begins with a discussion of the causes that prevail generally in the production of insanity, enumerating: first, intoxication, including the abuse of stimulants of all kinds, their effect on the individual and on his offspring; second, defective nutrition—including bad sanitary arrangements—which leads to malnutrition and exhaustion of the nervous centers and degeneration of race; third, various causes, chiefly moral, which excite or depress the emotions profoundly, and lastly intellectual strain.

These various ætiological factors are considered in connection with the mental aspects of the prehistoric man; of the ancient Jews and Egyptians—and of the Greeks and Romans. In this discussion our author has expended a vast amount of time in historical research, and his deductions are well worth the careful attention of the profession, as they are of great practical importance to the laity.

In the conclusion of this part of his subject he says: "After the necessarily imperfect sketch we have drawn of the psychological bearings of ancient history, as to the prevalence of the main causes of insanity, we endeavor to draw a general conclusion, we appear to be warranted in saying that mental disease was not likely to be largely developed among the primative races, that the causes of mental disorder must have exerted a very considerable influence upon the four important nations referred to, less in their earlier, much greater in their later and highly organized condition."

"In favor of the nations of antiquity as compared, with England, may be enumerated less dram and beer drinking and fewer half-starved and diseased children reared."

"And, again, the very benevolence and consideration which a

humane nation like England displays towards the poor, and those of feeble mind, or who are becoming insane, instead of allowing them to perish, favors alike the accumulation of insane persons, and the propagation of the disease by such, before they are placed in restraint or after their recovery. Feeble mental constitutions perished by the way in Egypt; sons, probably affected with moral insanity, as evinced by disobedience to parents, etc., were stoned to death in Palestine; homicidal men killed and were killed in the wars of Greece and Rome, and defective children were thrown down the Tarpeian rock. There was not, therefore, so much feebleness, moral insanity, or homicidal impulse transmitted to the next generation in the old heathen or Jewish, as compared with modern Christian populations."

The second part of the book is devoted to the consideration of the subject in its relations to modern life, with chapters on: 1st, insanity, chiefly in relation to the working classes; 2d, insanity in relation to the higher classes, and 3d, facts and figures in regard to the increase of insanity. In these chapters will be found an interesting psychological comparison between modern and ancient life and a satisfactory explanation of the greater prevalence of insanity at the present time than formerly.

The third part is a discussion of the important question of prevention. In this he enunciates as a cardinal principle that the brain is the organ of the mind and subject to the laws of physical life in general, and to those of cerebral life in particular—that proper nourishment, assimilation and discharge of effete matter are as necessary for the mind organ as for any of the other viscera of the human body.

Chapter IX. is entitled "Warnings of Danger," and is given to the consideration of certain symptoms of brain lesion that our author regards as of special prominence in the onset of insanity such as insomnia, cephalalgia, mental inaptitude, listlessness, various emotional disturbances and indecision of purpose. He also, in the same chapter, draws an excellent picture of the insane temperament.

In chapters X. and XI. are considered the importance of cheerfulness, mental rest and proper diet in arresting the facile descent to madness.

These chapters are admirably written, full of valuable facts and well worth the careful study of every physician.

The book closes with several pages of tersely written psychological axioms, rich in wholesome counsel, for those unfortunate enough to possess the insane neuroses. D. R. B.

NERVOUS DISEASES: THEIR DESCRIPTION AND TREATMENT. By Allan McLane Hamilton, M. D., one of the attending physicians at the Epileptic and Paralytic Hospital, Fel. N. Y. Acad. Med., etc., etc., 8vo., pp. 512, with 53 Illustrations. Philadelphia: H. C. Lea, 1878.

After having read the various and widely differing reviews which have appeared, we took up Dr. Hamilton's book in a very uncertain mental condition, but with every intention to ascertain the real character of the volume in hand.

A very careful examination has fully demonstrated that the many favorable notices which have appeared in the various journals have been in consonance with the merits of the book, and, further that the four evidently *personal* and self-condemnatory reviews, which stand arrayed against the honest and truthful voice, have emanated from some unworthy rival, from one and the same person. Such scurrilous attacks are not only grossly unfair, but are a reflection upon the profession. Although eventually suicidal, such practices succeed for a while in influencing the unwary.

The author's self-imposed task was no simple one; he has stated in his "preface" that his object has been to produce a concise and practical work, whereby the diseases of the nervous system may be, if possible, more comprehensible to his readers than they have been by former elucidations, and we do not hesitate to affirm that he has produced the best text-book, considered in all its relations, written in the English language. Hammond's excellent work is more bulky without conveying any more information; then, too, it contains some views which have not been accepted by other neurologists, or in any wise satisfactorily demonstrated. Like lectures in general, Charcot's and Wilke's works are very instructive and interesting reading for the general and special practitioner, but are too verbose and too limited in sub-

jects for the use of students. Dr. Hamilton's book is especially adapted for the use of students; it is essentially a text-book. Its arrangement is excellent. Beginning with the cerebrum and its membranes, it follows a course therefrom to the cerebellum, spinal cord, medulla oblongata, cerebro-spinal nerves, and, finally, to the peripheral nerves. The book first introduces us to what and how to observe and record in patients, gives directions for making post-mortem examinations in nervous cases, and very satisfactorily explains the use of the various instruments needed for a proper diagnosis, namely, the thermometer, æsthesiometer, piesmeter, dynamometer, ophthalmoscope, electrical apparatus, rubber muscles, etc. Wood cuts illustrate the text. The diseases of the cerebral meninges are excellently described and diagnosticated, reports of clinical cases materially adding to the elucidation of each subject. The diagnosis of ante-tubercular meningitis (acute hydrocephalus) is a model of excellence. A clearly described article on cerebral hyperæmia brings us to the best chapter in the book, cerebral hæmorrhage. Twenty-nine pages are devoted to this subject, which is treated in a masterly manner. No one can read this article without gaining a better understanding of this affection. We notice an error on page 95, wherein the author's calculation has been a little at fault. We presume Dr. H. refers to the *twenty* cases, with no history as to cause, when speaking of those wherein the attack came on during the *night*, instead of *thirty*, as is stated in the text.

Of cerebral anæmia, embolism, and thrombosis, the student shall find a concise and clear exposition. Stomachic and auditory vertigo are not omitted. Every student who has studied cerebral softening in other works must hail with delight the author's most lucid and full elucidation of this interesting though difficult subject. This chapter alone is worth the price of the book. Aphasia is well described; excellent wood-cuts illustrate certain brain localizations. The chapter on "Brain Tumors," ranks next to that on cerebral hæmorrhage in point of excellence. It is a very complete chapter; and, with the assistance of Petrina's (of Prague) directions for their localization, the practitioner may diagnose these tumors with some degree of certainty. The woood-cuts accompaning the text are very good.

Spinal affections are fully exposed in the light of our latest knowledge. We have only time and space to call attention to the fact that "tetanus" is an able article, its value being greatly enhanced by the figured map of the Long Island district. Dr. H. has embodied his personal inquiries upon this district in the volume. The other exhaustive and eminently practical article in this book is upon epilepsy; a better one could scarcely be written. Every practitioner who thinks the routine use of the bromides is the best and proper treatment of this affection should certainly purchase the author's work, read and digest his remarks upon the treatment of this obscure disease. Bulbar paralysis, cerebro-spinal meningitis, alcoholism, hydrophobia, hysteria and its varieties, chorea, paralysis agitans, and Graves' disease, are all well described. Neuralgia and other diseases of the peripheral nerves are equally well treated of. An important feature for students is an appendix of 95 excellent formulæ. A full index closes this interesting and valuable production.

We have noticed some typographical errors, unavoidable in a first edition. Take the book all in all, considering the author's concise and lucid style, his rare ability in compressing a large amount of information into small space, and the fact that he has elucidated his subject in the light of the latest researches, we assure the student and general practitioner that no better book of its kind exists than "Hamilton on Nervous Diseases."

F. D. B.

A GUIDE TO THE PRACTICAL EXAMINATION OF URINE. For the use of Physicians and Students. By James Tyson, M. D. Cloth, pp. 172. Second edition, 1878.

Little need be said to introduce this second edition of Dr. Tyson's work. Special credit is due the author for the minute attention which he has paid to the examination for albumen. We regret, however, that the author has not incorporated the very simple methods of estimating the quantity of albumen approximately by a dilution of the urine. The suggestion, we think, was made by Dr. Roberts, of Manchester.

There is another omission which we also note, namely, the estimation of urea by the diminished specific gravity, after

subjecting the urine to the action of the hypochlorite solution. This method is due to Dr. G. B. Fowler.

We should like also to have seen some mention made of the probable relation of the presence of carbonate of ammonia in the blood, to the phenomena usually referred to uremia.

Although we refer to what we consider omissions, the reader will be amply repaid by the accuracy of detail which the author displays on those subjects that he has developed.

R. T.

TRANSACTIONS OF STATE MEDICAL SOCIETIES.

1. *Transactions of the Medical and Chirurgical Faculty of the State of Maryland. Eightieth annual session, held at Baltimore*, April, 1878.

2. *Transactions of the Iowa State Medical Society*, 1877–78. Volume III., pp. 196.

3. *Transactions of the Twenty-fifth annual meeting of the Medical Society of the State of North Carolina, held at Goldsborough*, May 18th, 1878, pp. 103.

4. *Transactions of the Medical Association of the State of Alabama. Thirty-first session*, 1878, pp. 311.

1. The *Faculty of Maryland* knows well to honor its dead. It paid a fitting tribute to the memory of its distinguished member, Professor Nathan R. Smith (who died July 3, 1877), in the address and biographical sketch by S. C. CHEW, M. D., and by adorning the transactions with the picture of the departed friend.

Professor ALAN P. SMITH, reports fifty-two successive cases of lithotomy without a single death. "Of these, 16 were below five years of age, 13 between five and ten years, 11 between ten and twenty years, 5 between twenty and forty years, and 7 between forty and seventy-five, 4 more below two years of age, the youngest being twenty-two months. The oldest was seventy-one years. Of the whole number, only two were negroes; these, curiously, were the youngest, of twenty-two months, and the oldest, seventy-one years." With the exception of six cases, the operation was performed with the lithotome of his father, the late N. R. Smith; and to the use of this instrument, he attributed in a great measure the satisfactory result of the operations.

The calculi removed varied in composition and size; the largest one measured 13 ctm. in circumference, and weighed 6 decagrams. In a few cases after hæmorrhage occurred, in two instances partial non-retention of urine was the result, and in one case there remained a small fistulous opening in the perineum.

The most interesting case of the whole series was a middle-aged man with a double penis. "The organs were separated above by a deep sulcus, below which they were closely united. They were slightly under the average normal size, and were unprovided with any prepuce. The one upon the right of the median line was normal in every respect, being traversed by an urethra beginning at the extremity of the glans, while the one on the left had the urethral opening below, and just in advance of the scrotum. From this point forward to the glans, the organ was perfectly solid. * * * The scrotum was natural in every respect, and contained two testes of normal size. Upon making an examination, I, of course, passed the sound into the urethra of the right hand penis. The instrument slipped readily into the bladder, but I could not detect by its aid the slightest symptom of calculus. Very much surprised at this, I asked the patient through which opening he passed his urine, and was informed that he used both; and, what was more curious still, that he could use either at will, or that he could first pass a quantity of urine through one, and immediately after discharge about the same amount through the other. Then, for the first time, it occurred to me that there were two bladders; and calling for two utensils, I desired him to first discharge from the right hand organ. From this there flowed a quantity of clear, amber-colored, healthy urine; while, when directly afterwards the same act was performed by the one on the left in a separate vessel, the fluid was ammoniacal and turbid with mucus and pus. Then, at once the case was clear; he had two bladders. The one which I had not yet examined contained the stone sought for. I then attempted to pass my sound into the second urethra, but found the canal contracted and tortuous. Substituting a bougie tipped with steel, I was rewarded by striking immediately a large calculus. Several days were spent in dilating and straightening

the canal by means of sea-tangle tents. The removal of the stone was readily effected, the incision being made from within, outward with a bistourie caché. Violent hemorrhage ensued after the operation, and continued very profuse in spite of the most strenuous efforts to arrest it, till he became almost perfectly exsanguine. The pulse ceased to beat at the wrist * * and only slight heart sounds could be detected. However, * * the hæmorrhage ceased; he commenced slowly to react, and progressed to perfect recovery."

Dr. THOMAS R. BROWN follows with a consideration of the various modes of treating urethral strictures.

Dr. JOHN S. LYNCH briefly treats of all agents which reduce animal heat, under the names of *apyretics* and *antipyretics*.

DR. P. C. WILLIAMS discusses the much mooted question of *chloroform in obstetrics*. He considers chloroform as safe as any other anæsthetic in obstetrical practice, and advocates its use: 1, "whenever during labor the woman becomes nervous, fretful, and apprehensive;" 2, "when the os uteri remains firm and unyielding, and threatens to produce a long, tedious labor;" 3, when the termination of the labor is delayed by rigidity of the perineum; and, 4, in all obstetrical operations.

DR. I. E. ATKINSON, in his report on materia medica, makes some very sensible remarks in favor of the metric system.

2. Of the many short articles which compose the volume of the *Iowa State Society*, none has interested us so much as the paper on "Headache," by DR. E. H. HAZEN. May be because headache with its hundred-fold variations is a dear old friend of ours. Dr. H. confines his remarks to headache in diseases of the eye and ear, and shows how it is often erroneously regarded as a neuralgia, which has aggravated an existing eye trouble, such as granular conjunctivitis, where it is a symptom indicating the outbreak of inflammation of the cornea; or headache is treated as neuralgia, while the causative disease is entirely overlooked. As instances of this kind, glaucoma, neuro-retinitis and the errors of refraction are mentioned. In regard to headache in neuro-retinitis, we think the writer is in error. If headache is associated with neuro-retinitis, it is not due to the retinal affection, but some intra-cranial trouble is the common cause of both

headache and retinits. Br. Carter, in his lectures, very truly says, "Retinal affections, such as neuro-retinitis leading to nerve atrophy, and the like, are even characteristically painless. The attention of the patient is usually first called to them by the discovery that his sight is fading away without pain."

DR. WM. WATSON made a short report of an "Epidemic of Cerebro-spinal Meningitis," which occurred in Dubuque and vicinity, during the winter of 1871–2. It must be regretted that he had not kept accurate records of his cases to give a more complete account of his observations.

"Pollution of Drinking-water," by Dr. W. D. MIDDLETON, "Puerperal Convulsions," by DR. C. H. RAWSON, and a number of other short papers complete this interesting volume.

3. The very modest volume of the *North Carolina State Society* contains a paper on "Diphtheria," by DR. CHAS. DUFFY, JR., giving a synopsis of the literature, and reporting a number of cases which came under his observation.

DR. R. H. LEWIS follows, with a short report of "Cases of Ophthalmic Practice." He describes a case of corneitis for the sake of illustrating the injurious effect adstringent eye waters have upon the inflamed cornea: and a case of amblyopia from chronic alchoholism, which corroborated the usefulness of the phosphates in such cases.

DR. W. T. EMMETT has selected "The Life and Discoveries of Harvey," as subject for the annual address.

DR. R. L. PAYNE'S valedictory address is a discourse on "Maternal Impressions," the pith of which seems to be contained in the following utterance (p. 100): "The very fact of the prevalence of a strong belief in 'maternal impressions' among the women themselves, although not a positive proof of its truth, is, at least, a forcible presumptive evidence in its favor." Sic!

4. By an act of the general assembly in 1875, the *Medical Association of Alabama* was constituted a permanent Board of Health of the State, and the county societies affiliated with the medical association, were made the Boards of Health for their respective counties, under the direction and control of the association. For this reason, sanitary topics figure largely in the transactions of this society. The president, PETER BRYCE, made

"Public Hygiene" the subject of his annual message; Dr. GEO. A. KETCHUN spoke of the "Value of Health to the State;" and the Board of Censors, as a committee of public health, gave a lengthy report of the Quarantine Convention which was held at Jacksonville, Florida, in February of this year.

"Hermaphroditism" is the title of a very elaborate dissertation by Dr. JEROME COCHRAN. By the same author is the following paper: "What is Puerperal Fever?" His answer is that puerperal fever is not a disease *sui generis*, but a symptomatic fever attendant upon erysipelatous, pyæmic, or septicæmic affections in puerperal women. This doctrine is now adopted by most writers, but at the time the paper was first read before the Mobile Medical Society in 1875, there was still some diversity of opinions in regard to the nature of puerperal fever.

A lecture on "The Ophthalmoscope and its Uses," by Dr. W. H. SANDERS, and one on "Endometritis," by Dr. W. H. JOHNSTON, conclude the volume.

F. C. H.

A PRACTICAL TREATISE ON THE DISEASES OF THE EAR, INCLUDING THE ANATOMY OF THE ORGAN. By D. B. St. John Roosa, M. A., M. D., etc. *Fourth Edition.* New York: Wm. Wood & Co. Chicago: Jansen, McClurg & Co.

From the brief advertisement of this edition we learn that, with the exception of the Chapter on Diseases of the Internal Ear, "the work remains as in the last impression." In view of this, together with that other fact that the profession is already quite familiar with the former editions of this excellent treatise, we do not think an extended review of the work is called for at this time.

The appearance of a fourth edition of the work in less than five years from the time it was first issued, is certainly sufficient evidence of its popularity.

We regret to find that of a number of errors which appeared in the first edition, several still remain in this. A few mistakes in a new medical work can easily be excused, but to continue them through a fourth edition, if not censurable is certainly inexcusable.

On page 186, in describing the membrana tympani, the author says: "The handle of the malleus divides the membrane into two parts. The anterior part is larger than the posterior." If this be true, we would suggest that the author have the wood cuts on the opposite page as well as the chromo-lithograph, representing the normal membrane changed. Errors which appeared on pages 201 and 217 have been corrected. Page 305, solution of iodine should be solution of iodide of potash. Page 465, the length of the horizontal semi-circular canal is given as being 5 millimeters. While these errors, with others of like character, are not sufficient to seriously impair the value of the work, it does seem that they should have been corrected.

The chapter on diseases of the internal ear has received valuable additions in the way of clinical histories and a more extended discussion of several diseases. In the management of inflammation or hyperæmia of the internal ear, the author very properly suggests that possibly not enough attention has been paid to the protection of the ear from noises. It certainly appears reasonable that rest, a factor so important in the treatment of inflammations of other parts, should not be ignored here.

If there is a doubt as to the cause of the inflammation, the importance of giving the patient the benefit of the doubt by instituting a thorough anti-syphilitic course of treatment is emphasized.

As to electricity, Dr. Roosa still thinks that as an aid in diagnosis it is of no great value, and as a remedial agent he says: "My own experience has been purely negative."

While it is to be hoped that another edition will not appear without a more extended revision, making additions that the progress of the science demands, and wiping out all errors of former editions, we still think that the work has not lost prestige—that it still remains the best practical treatise on diseases of the ear.

W. T. M.

WALSH'S PHYSICIANS' HANDY LEDGER. A Companion to Walsh's Physicians' Combined Call Book and Tablet. By Ralph Walsh, M. D. Chicago: W. T. Keener.

This book is doubtless already known to many of our readers.

It greatly facilitates the work of book-keeping for the physician. It is arranged with lines and columns on the one page for the number of calls, and corresponding lines and columns on the opposite page for the necessary particulars. Those who meditate a change in their system of booking will do well to become acquainted with it. R. T.

BOOKS AND PAMPHLETS RECEIVED.

Record of Medical Observations. XXIII edition. (Prescription blanks; metric system.) New York. Edward Seguin, M.D.

Notes on the Treatment of Skin Diseases. By Robert Liveing, A.M., M.D. 4th edition. Revised and Enlarged. 12mo., cloth; pp. 127. New York: W. Wood & Co. 1878

Diseases of the Bladder and Urethra in Women. By A. J. C. Skene, M.D. Cloth; 8vo., pp. 379. New York: W. Wood & Co. 1878.

Walsh's Physicians' Handy Ledger: a Compilation of Walsh's Physicians' Combined Call Book and Tablet. By R. Walsh, M.D., Washington, D. C. Chicago: W. T. Keener, 94 Washington street.

Walsh's Physicians' Combined Call Book and Tablet. 4th edition. W. T. Keener, 94 Washington street, Chicago.

The Illinois State Medical Register for 1878–9. Published annually, under the supervision of the Chicago Medico-Historical Society. with the co-operation of the Ill. State Med. Society. By D W. Graham, M.D. Vol. IV. Chicago: W. T. Keener, 94 Washington street.

Medical and Surgical Directory of the State of Iowa for 1878–9. By Ch. H. Lothrop, M. D. Cloth; pp. 155.

Fifth Annual Report of the State Board of Health of the State of Michigan for the Fiscal Year ending Sept. 30, 1877. Cloth; pp. 503.

Physician's Pocket Day Book. By C. H. Leonard, M. D. Chicago: Jansen, McClurg & Co.

A Therapeutical Inquiry into Rational Medicine. By S. W. Whitmore, M.D.

Case of Sarcoma of the Kidney in a Negro Child. By W. H. Gedding, M. D. Reprint from Gynæcological Transactions.

State of Illinois, Cook County, Circuit Court; Decision rendered by Hon. E. S. Williams at the October term of Court, 1878; Nathan J. Aiken vs. State Board of Health. Twenty copies.

Report on Malpractice. A paper read before the Maine Medical Association June 12, 1878. By Eugene F. Sawyer, A. M., M. D.

Clinical Lectures on Surgery, delivered at Starling Medical College. By J. H. Pooley, M. D. Reprint from *Ohio Medical and Surgical Journal.*

Forms for the Taking of Throat Cases, with Outlines of Fauces and Posterior Nares and of Larynx, as seen in the Mirror, and with a Tabular Statement of the Differential Signs of Various Laryngeal Diseases. Also, for the Taking of Aural Cases, with Drawing and Outlines of the Membrana Tympani, of Fauces and of Posterior Nares, and with a Short Explanation of the Significance of Various Aural Symptoms. By Lennox Browne, F. R. C. S., editor.

Treatment of the Fracture of the Shaft of the Femur. The American Method. A paper read before the Minnesota State Medical Society, at St. Peter, June 18, 1878. By Franklin Staples, M. D. Reprint from the Transactions of the Society, 1878.

The Spontaneous and Artificial Destruction and Expulsion of Fibrous Tumors of the Uterus. By W. H. Byford, M. D. Reprint from Vol. I, Gynæcological Transactions, 1876.

Fibrous Tumors of the Uterus. By W. H. Byford, M. D., Chicago. Vol. III, No. VII of a Series of American Clinical Lectures. Edited by Ed. Seguin, M. D.

Medical Missions at Home and Abroad. By J. G. Kerr, M. D.

Prevention of Disease, Insanity, Crime and Pauperism. A paper read before the Conference of Charities at Cincinnati, May 27, 1878. By Nathan Allen, M. D.

Observations on Nasal Catarrh and Catarrhal Deafness. By W. A. Williamson, M. D.

Case of Poisoning by Oil of Chenopodium. By Thomas R. Brown, M. D. Reprint from the *Maryland Medical Journal* for Nov., 1878.

The Relation of Ozone to Disease: Prize Thesis. By J. F. Baldwin, M. D. Reprint from *Ohio Medical and Surgical Recorder*, Oct., 1878.

Discours Prononcé à la re-ouverture des Cours, le 1st Octobre, 1878. Par T. E. D'Odet D'Orsonneus, M. D.

Restoration of the Membrana Tympani. By S. O. Richey, M. D. Extracted from the Transactions of the Illinois State Medical Society. Springfield, May, 1878.

The Nurse Maid and Mother of the Syphilitic Child. (A Clinical Lecture delivered at the Dermatological and Venereal Clinic, Rush Medical College.) By James Nevins Hyde. Reported by L. C. Waters, clinical assistant.

Restriction and Prevention of Diphtheria. Document issued by the State Board of Health of Michigan.

Relative Frequency of Color Blindness in Males and Females. By B. Joy Jeffries, A. M., M. D. Reprint from the *Boston Medical and Surgical Journal*, July 25, 1878.

The Local Treatment of Eczema. By Henry G. Piffard, M. D. Reprint from *The Medical Record*, Oct. 26, 1878.

On Gastro-Elytrotomy. By Henry J. Garrigues, M. D. With three wood-cuts. Reprint from *The New York Medical Journal*, Oct. & Nov., 1878.

Apparatus for Transfusion. Asphyxia in New-Born Children Considered from a Medical and Legal Standpoint. By H. J. Garrigues. Reprint from *American Journal of Obstetrics and Diseases of Women and Children*, Vol. XI, No. IV, Oct., 1878.

TOO LIBERAL INDEED!—We read in the *Medical Press and Circular*, of an extraordinary liberality on the part of London hospitals, which we would not advise our hospital authorities to adopt: "The out-patient department of St. Thomas' Hospital is very extensive, the total attendances during the last year being nearly 140,000. Some of these patients come from considerable distances, and are necessarily detained at the hospital, waiting their turn in rotation for medicine, etc. It frequently happens that they become faint before leaving the hospital. In view of this, the treasurer and committee have made arrangements for supplying them with refreshments, such as tea, coffee, milk, rolls, cakes, etc., at a small fixed charge, so that such as require it may obtain a single meal at a small cost. * * * Somewhat similar arrangements have been adopted at Guy's Hospital."

As the *Press and Circular* says: "There is such a thing as being too kind and we should like to be sure that such hospitality will not rather attract than keep away those applicants who can well afford to pay for the advice they require."

A FACT of some medico-legal importance is asserted by Dr. Géllè. The tympanic cavity of a fœtus at term is filled with a gelatinous fluid. If a child has breathed an hour or two, the tympanum will be found to contain air.—*Med. Press & Circular.*

Selection.

THE CRITICAL PERIOD OF HOMŒOPATHY.

By H. M. Paine, M. D., Albany.

[The following article, taken from the *Homœopathic Times*, is here reproduced as an interesting evidence of the fact of the decadence of homœopathy. The tidal wave, which long since ebbed away from the shores of the old world, and which but recently was at its flood in America, is evidently doomed to complete disappearance. The misstatements here made relative to regular medicine, require no refutation; nor need the readers of this journal be told that the term "allopathic," which is so frequently repeated below, always has been and always will be utterly repudiated by the true physician. Ed.]

Dr. E. M. Hale published an article in the November (1877) number of the *American Homœopathist*, entitled, "A Critical Period for Homœopathy," in which he clearly sets forth the danger to our school from the adoption of homœopathy by old school physicians, *without an open acknowledgment to that effect.* This article is strongly supported by indisputable evidence, and clearly points out the influences which are accomplishing the destruction of the homœopathic school, *as a separate and influential body of medical men.*

Accessions to our ranks are derived from only *two* sources: those who are educated under homœopathic auspices, and converts from the so-called regular school. Of the first class named, those who have graduated from our own medical schools, there were the present year only three hundred and nineteen,* a number so small as to be scarcely sufficient to fill the places made vacant by death and other causes. It is plainly apparent, therefore, that recruits from this source must be largely increased, or else we

* *Investigator*, May 1, 1878.

must depend chiefly on the second class mentioned, viz., converts from the so-called regular school.

On even a cursory examination in this direction, the result is exceedingly unpromising. Those of us who were participants in the contest between the two principal rival schools can vividly recall the scenes which occurred twenty and even fifteen years ago. Then there were constant accessions to our ranks from those of our opponents. Desertions were so numerous as to impair the strength of allopathic legal organizations, and, in some localities, seriously threaten their existence. At the present day the exodus has nearly ceased. The comparatively few converts who are willing, openly, to admit their belief in homœopathy, may be numbered by tens, while formerly there were hundreds.

In looking for the causes which have brought about this result, we find that they are mainly due to the adoption of a wise and liberal policy on the part of the allopathic school toward its own members. During the past ten years instances of the resort to discipline for practicing homœopathically, have been of very rare occurrence. The so-called regular school has virtually abolished all rules having reference to the infliction of a penalty regarding matters of medical belief. Its members are now freely allowed the privilege of believing and practicing all systems of treatment extant. It has practically adopted the wise suggestions recommended by Dr. Dunham, in his admirable address, delivered before the American Institute of Homœopathy, in June, 1870, regarding "Liberty of opinion and action."

This prudent and liberal policy has enabled our opponents to retain very large numbers of physicians who would otherwise have united with homœopathic medical societies.

By this radical change of base our rivals have largely promoted the popularity and numerical strength of their own school. Strange as it may appear, is it not on account of the adoption of this liberal policy, that the accessions to the number of homœopathic physicians are mainly within the membership of the so-called regular school? While the number of physicians who are willing to publicly announce their belief in homœopathy may be diminishing, the number who are *actually* practicing homœopathically is *steadily increasing.*

I am acquainted with a number of allopathic physicians residing in this city, all of them in good standing in their own medical society, who have practically adopted homœopathy.

One of my patients, a mother of several children, resided the past summer with her family thirty miles distant from Albany in the country. She at first expressed unwillingness to take her family so great a distance from reliable homœopathic aid. But, on applying to the allopathic physician, a young man of decided ability residing in the neighborhood, was pleased to find that he carried a case of remedies like those used by homœopathists, and that he prescribed remedies which were quite as pleasant to the taste as any she had ever received from homœopathic sources. When twitted of being a convert to homœopathy he merely replied, "That the progress of regular medical practice had been very rapid of late years."

The trustees of the Albany (allopathic) hospital recently adopted a resolution allowing physicians of any school the privilege of treating pay patients at the hospital. The adoption of a provision so eminently just and reasonable is a result of the influence of public sentiment in behalf of *liberty of opinion and action*, as against the illiberality and sectarianism of the allopathic school, which, hitherto has been the principal barrier to the acceptance and adoption of homœopathy on the part of its more candid and unprejudiced members. Viewed in this light, it is a gratifying testimonial to the practical superiority of homœopathic principles.

The time has come, sooner than many of us anticipated, when the so-called regular school refuses longer to discipline those of its members who may adopt and practice homœopathy. This evidence of toleration on the part of that conservative fraternity is highly commendable, and worthy of imitation by our own school. While we rejoice in the promulgation of homœopathic principles, can we not easily perceive in this *coup d'etat* an element which will effectually prevent the further growth and prosperity of the homœopathic school *as a distinct and influential organization?*

Whatever the influences have been which have checked the outward development of homœopathy, it is plainly evident, that the homœopathic school, as regards the number of its openly

avowed representatives, has attained its majority, and has begun to decline both in this country and in England.

The February number of the London monthly *Homœopathic Review* contains the following significant statement: "The number of those who are ready to assert their confidence in homœopathy may not have increased of late years—it may possibly have diminished—but that of those who have a confidence in homœopathy which they lack the courage to assert, has increased to an extent we have no means of calculating."

Dr. Drysdale, in the January number of the *British Journal of Homœopathy*, writes very despondingly: "Our numbers are not only not increasing in proper ratio, not even increasing at all, nay even *actually diminishing.*"

Regarding the foregoing quotation, the writer in the *Monthly Review* offers the following explanation: "To prove his case he (Dr. Drysdale) examines the homœopathic directories issued since 1853, and if their contents were any evidence at all, his conclusions would be incontestable. But such evidence as they are capable of affording is worthless in endeavoring to estimate the extent to which homœopathy is practiced in this country, or the number of those who, more or less habitually, prescribe homœopathically for their patients."

The doctor then proceeds to relate several instances which have fallen under his own personal observation, of old school physicians who have practically adopted homœopathy, while still retaining professional good standing in their own medical associations. He then continues:

"We might multiply very many fold such illustrations of the diffusion of homœopathy, of its practice by men never suspected to have adopted it. * * * * * That such should be the case is to be regretted chiefly because it shows a great weak morale to be more prevalent in the profession than is consistent with the scientific progress of our art. But it is no evidence that the practice of homœopathy has retrograded. On the contrary, it is a step in advance; it represents a period in the history of homœopathy through which it must pass, ere it meet with a general, an acknowledged acceptance throughout the profession."

Dr. Hoyne, in an article read before the Illinois Homœopathic

Medical Association, states that the number of homœopathic physicians in Illinois has scarcely increased, perhaps actually diminished during the past five years, while the population of the State, during the same period, has more than doubled.

Dr. Bruce, in his directory for 1878, furnishes the names of nine hundred and fifty homœopathic physicians residing in the State of New York. Making allowance for numerous inaccuracies, it is probable that the actual number is not far from eight hundred, a very moderate increase if any (*Investigator*, Mar. 15, 1878), perhaps an actual decrease during the past decade; while during the ten years ending July, 1875, the population of the State increased twenty-three per cent.

The increase of population in fifteen of the Northern and Eastern counties of the State of New York, during the past ten years, is sixteen per cent., while the number of homœopathic physicians residing in those counties, has not proportionately increased, probably has not increased at all.

Dr. Bruce states in his directory, edition of 1878, that he has the addresses of over 5,000 homœopathic physicians residing in the United States. Dr. Hoyne, in his directory of 1878, also states that he has the addresses of the same number of homœopathic physicians. This is no larger than the estimated number of homœopathic physicians twelve or fifteen years ago.

After a careful examination of the most recent sources of information, we are forced to the conclusion that there is, in all probability, a gradual decrease in the number of homœopathic practitioners, and, if not an actual decrease, that the ratio of increase is far below that of the population in this country.

In view of the foregoing statements, are we not justified in concluding that the period has at length arrived for homœopathists to seriously consider whether it is desirable longer to maintain separate medical organizations and institutions? For, if the powerful influences which are now in active operation continue unchecked, will not the efficiency and influence of the homœopathic school, as a distinct body of medical men, be greatly impaired, and its ultimate disintegration merely a question of time?

If it shall be deemed important, on the part of members of

the homœopathic school, to maintain separate organizations, it is a matter of very great moment that measures be speedily devised and put in operation by which larger accessions to our ranks may be secured from the younger members of the allopathic school. A large proportion of the older members are zealous advocates of the allopathic system, and few of them can be induced to adopt homœopathy; but this is not true of the younger members. These constitute the large class who, at the present time, are secretly and openly practicing homœopathy while still retaining membership in allopathic associations.

Let us carefully examine this subject and endeavor to ascertain what motives induce these young physicians to unite with allopathic medical societies. • Why do they prefer allopathic fellowship rather than homœopathic? Many of the younger members of the profession have a decided predilection for homœopathy; it is obvious, therefore, that the motives which induce them to unite with allopathic societies are of great influence and power. It is also evident, that membership in homœopathic medical societies is unpopular; and that, in order to turn the tide in our favor, very decided measures must be speedily put in operation. Is it not reasonable to presume that large numbers of physicians who are now practicing homœopathically under allopathic auspices, could be persuaded to unite with homœopathic societies, where they more properly belong, and where they will obtain a clearer and more thoroughly practical knowledge of homœopathy?

In view of the importance of the new and critical situation in which our school is placed, is it not desirable, in fact necessary, that concerted action be taken and that vigorous effort be made to prevent the threatened extinction of homœopathic societies and institutions? Should we not at once open the doors of our medical societies to all educated medical men, and encourage them to unite with and assist us in promoting the advancement of medical science in all its departments! Have we pursued this liberal and unsectarian policy in the past?

Nay more, are we not at the present moment exhibiting a spirit of intolerance by rescinding liberal and unsectarian declarations of faith and practice?

Have we not given medical men to understand that they were

not wanted until willing to acknowledge before the public their belief in homœopathic principles? Have we not thereby actually erected a *sectarian barrier* to full professional fellowship, which ought never to have existed, and which is now proving decidedly disadvantageous to the development of our school, and is rapidly sapping its life blood? Is it wise to longer restrict membership to those physicians only who can accurately pronounce the shibboleth of doctrinal belief?

But this is not all. Have we not, as a school, followed Hahnemann into the mazes of medical transcendentalism? Have we not, and are we not now endeavoring to associate with true homœopathy that which is false, visionary and fanciful? I refer particularly to theoretical errors of the minimum dose and dynamization of medicinal and non-medicinal substances. Although these errors of theory and practice have never been accepted by many homœopathists, yet, having never been discarded by a formal declaration to that effect, have they not largely contributed to the tardy adoption of homœopathic principles?

Ought not these important questions, at this critical period in the history of our school, to be speedily and seriously considered by the whole homœopathic profession?

A FAIR INFERENCE. — A lady's-maid visiting with her mistress at the residence of a celebrated surgeon, then deceased, noticed the classic invitation, "salve" upon the hall floor, and in the parlor a picture of Cleopatra applying the asp to her beautiful bosom. Whereupon, with that quick but not always correct woman's intuition about which we hear so much now-a-days, she confidently, but in all innocence inquired, "Dr. —— was a physician, was he not? I felt sure he was when I saw *salve* on the entry floor, and then that poor thing in the parlor, with her broken breast and the leech in her hand. I knew he must have been a doctor."—*Archives of Clinical Surgery.*

Summary.

Collaborators:

DR. H. GRADLE, DR. L. W. CASE, DR. R. PARK,
DR. R. TILLEY, DR. D. R. BROWER.

PRACTICAL MEDICINE.

THE ETIOLOGY OF TYPHOID FEVER. By Prof. Huguenin. (*Corresp. Blatt. f. schweiz. Aerzte.*, 1878, Aug. 1.)

On the 30th of June, 1878, the festival of the singing societies of the district was celebrated in Kloten (Canton Zürich, Switzerland), with a very large attendance. The meals were served at the hotel "Zum Wilden Mann," where about 800 to 900 pounds of viands, partly roast veal, partly sausages, were consumed. Since a large portion of the viands was found somewhat unpalatable, it was distributed gratuitously. It is not yet known where all the meat was obtained, but so much is certain, that at least one calf used was sick before it was slaughtered. The liver and brain of that calf had been consumed in the village Seebach, and had caused illness of the consumers. The rest of the carcass was sent to the hotel at Kloten.

This veal turned out to be infectious. The second day after the festival a number of inhabitants of the neighboring villages complained of nausea, anorexia, headache, fever, abdominal pains and meteorism. The first cases seem to have been the least severe; at least, a number recovered after a few days. More commenced on the third and fourth days, but most from the fifth to ninth day. The first 40 to 50 instances proved the veal to be the source of the infection. Pork had also been consumed that day,

but no case could be traced to it. A large number of persons had visited the celebration, but only drank wine, and none of them became infected. Others had partaken of the water without evil consequences. Many of the patients, on the other hand, declared that they had not even tasted water the entire day. Those who had partaken of the three different preparations of the meat were most seriously stricken, while the less severe cases had eaten only one kind of meat. Many, who had induced vomiting by excessive drinking, remained healthy.

The disease caused by this meat was typhoid fever (abdominal typhus). The fever followed the typical course in most cases. But all observers noticed the tendency to mental troubles, furious delirium, with a rather low febrile movement, and rapid favorable course. The delirium continued, in many instances, after antipyretic treatment had removed the fever. Another characteristic feature of the epidemic was enormous tumefaction of the spleen.

In four fatal cases, the autopsy has revealed all characteristic lesions of typhoid fever.

As a noticeable event, Prof. Huguenin adds, that several instances of genuine typhoid fever have occurred in calves in the barns of some of the patients.

THE NATURE OF SCIATICA. M. Fernet. (*Lyon Médical.*)

The author has pursued his researches which go to prove that primitive spontaneous sciatica, ordinarily due to a local chilling, should not be considered as a simple neuralgia, that is to say, as an affection without appreciable anatomical lesion, but rather as a veritable neuritis. Exposing the results obtained in the *Archives de Médecine*, M. Fernet remarked that he relied chiefly for the establisment of his opinion upon three clinical characters: the direct examination of the nerve by palpation, the frequent existence of trophic troubles, and the course of the disease. Recently, in the case of a man in his wards affected with sciatica, he had occasion to examine *post mortem*, the state of the diseased nerve, and he found a manifest increase of volume, as well as a very marked injection of the nerve, but this augmentation of volume may be readily perceived during life. Here are the directions which M. Fernet furnishes upon this subject: The patient lying upon the

back with the thighs slightly flexed upon the pelvis, and the legs upon the thighs, is directed to keep his lower limbs at perfect rest and to make no effort. You then explore the sciatic nerves with the fingers, which are pushed rather deeply into the popliteal space at first, then proceeding progressively upwards to the sciatic notch. The fingers being well engaged in the depth of this space, their palm or face turned towards the outer aspect of the thigh, and their extremities being occasionally carried from within outwards, the sciatic nerve is very distinctly felt under the form of a cord, and when this is firmly pressed you are apprised of the fact by the sensation which the patient experiences, a sensation only unpleasant on the sound side, but painful and accompanied with tinglings in the leg and foot of the affected side. The palpation is only really difficult in very fat subjects, or when the sciatic is very painful: in this latter case, pressure on the nerve is intolerable, and provokes reflex contractions which prevent the exploration.

By this proceeding, carefully applied, there are frequently found very notable differences of volume between the healthy and the diseased side, the nerve of the affected side appearing larger than that of the sound, a difference of consistence, the nerve of the affected side being harder than that of the sound side; a difference of form, the nerve of the affected side forming a cylindrical cord which pressure does not modify, whilst the nerve of the sound side appears to allow itself to be flattened out and even dissociated. The lesion which is thus discovered may, moreover, be confined to certain points of the nerve.

The nature of the pain, which is continuous, persistent at first, dull, and gradually intensified, limited to the nerve trunk, or even to a part of the trunk without constant peripheral radiations is also, according to M. Fernet, a further proof of the existence of a nerve-inflammation. The defects of nutrition, which, as M. Charcot has shown, are dependent upon inflammatory lesions of the nervous system, are not wanting here. There is often muscular atrophy of the leg and thigh, easily appreciated upon measurement.

At the same time with the muscular atrophy there is a thickening of the subcutaneous cellular tissue by a deposit of fat; these

two states appear to be in habitual connection with one another; and in order to appreciate this adiposis, it suffices to take up at symmetrical points on the two thighs or the two legs, a fold of the skin, and to pinch it moderately between the thumb and finger; you can then very readily recognize the greater thickness which exists on the diseased side: this thickening may be sufficiently great to mark the atrophy and to give to the limb a rounded form often noted in sciatica.

Zona, which is always an index of nerve inflammation, also sometimes appears in sciatica; lastly, the evolution of the disease may also be invoked, as being contrary to the hypothesis of a simple functional trouble devoid of lesion.

In a therapeutic point of view, it results hence, that if it be admitted that primitive, spontaneous sciatica is usually a neuritis, a resolutely antiphogistic medication will be employed against it: absolute rest, leeches, wet cups in the course of the nerve, vesicating strips at the back of the thigh, cauteries, etc., will be the chief means of treatment.

SURGERY.

FOREIGN BODY IN THE RECTUM: SUCCESSFUL REMOVAL. *Hospitals Tidende.* (*Canad. Jour. Med. Sci.*)

A man, æt. 35, introduced into the rectum, open end uppermost, a preserve bottle nearly seven inches long, for the purpose of stopping a diarrhœa. The next morning he complained of pain; chloroform was given, and the bottle, which could before this be felt in the rectum, passed higher up. It could now be felt through the abdominal walls, in the middle line, with the bottom just above the pubis. He was again anæsthetized and posterior linear rectotomy performed; but efforts to reach the bottle in this way were unavailing. Abdominal section was then made in the linea alba. The gut was divided over the bottle, and removal slowly effected. The neighboring parts were protected from escape of fæces by sponges and compresses. The gut was closed with catgut sutures. Recovery was slow and com-

plicated by local peritonitis and abscesses; but the patient was discharged *cured* in less than fourteen weeks.

The reporter, Dr. Studsgaard, refers to three other cases of a similar character reported by Ogle, Closmadeuc and Reali; this, with the others, making a group of rare and curious cases.

ACTION OF PARENCHYMATOUS INJECTIONS OF GLACIAL ACETIC ACID ON CARCINOMA. Dr. Gies. (*Centralblatt f. Chir., No.* 19.)

The author injected diluted glacial, acetic acid (1 : 3 aq. destil.) into a recurrent carcinoma, as large as a hen's egg, seated in the right side of the inferior maxilla; the injection excited suppuration, and the tumor was diminished to the size of a hazelnut. A primary carcinoma, as large as a hen's egg, situated beneath the ear of the same patient, was treated in the same way, and after 21 days had almost entirely disappeared; 25 syringefuls were injected before this tumor suppurated. A carcinoma as large as a hen's egg, situated in the left breast of a woman, suppurated after 10 injections, and in the course of a month had shrunken to a nodule about the size of a hazlenut.

TREATMENT OF BURNS.

Many of the journals of the day have allusions to the use of a solution of sodic bicarbonate as a local application to burned surfaces, however large. Some of their readers have tried solutions of varying strength, and not a few have written that they were disappointed. In order to produce the desired effect, it is necessary to use a *saturated* solution, 1 pt. to 6, or thereabouts, and apply it on lint or other suitable dressing. This in many cases gives almost instantaneous relief.

OBSTETRICS.

A NEW DEVICE FOR ARRESTING POST PARTUM HÆMORRHAGE. Christie. (*Med. Press & Circular*, Sept. 4, '78.)

This consists of an india-rubber bag of about a pint capacity, having a tube and stop-cock attached. The air is pressed out of

the bag, the valve closed, and the former introduced into the uterine cavity. The end of the tube is then opened in a basin of tepid water, at a height of two or three feet above the uterus. By atmospheric pressure it will be filled in a few seconds, and by regulating the height of the water supply, the pressure in the bag can be made to counteract the intra-arterial pressure. By keeping the valve open, the uterus expels from the bag, as it contracts, the requisite amount of water, and if it relax in the after pains, the water readily re-enters, and the pressure is always the same. In post partum cases the outside of the bag should always be smeared with glycerine. The author uses the same instrument in cases of placenta prævia, only filling it with cold instead of tepid water.

Ophthalmology.

Retinal Photo-Chemistry. (*Br. Med. Journ.*, Aug. 31, 1878.)

In 1870 Boll discovered that the retina is only absolutely colorless and transparent for two-thirds the depth of its lowest layer, and that for the lowest third of the rods it is plunged in a purple-colored substance; this coloration having been long unknown, because the mere access of light destroys it, decolorizing it with extreme rapidity. The study of this substance—the retinal purple—and its modifications by light, led the author to these formal conclusions: That the action exercised upon the retina by light is of a chemical order, and the formation of images a true photography. Very positive images of objects before which the eyes have been exposed immediately before and after death, put this fact beyond contest. Light effaces and destroys this retinal purple, but it is physiologically re-secreted during life in proportion as it is decolorized.

Soon after these experiments and their verification, Kühne sought and discovered the organ of the incessant reproduction of this retinal purple. This organ is the mosaic layer, or hexagonal epithelium of the choroid, which must now be definitely attached

to the retina itself, under the name already proposed by several anatomists, of retinal epithelium.

M. Giraud-Teulon, in a recent report to the Académie de Médecine, in which he discusses the new state of facts, develops the new considerations which it introduces into the pathological theory of the production of color. Thus, so far as concerns the persistence of positive images—that is to say, the survival of the sensation after the impression which has produced it—the very fact of the chemical decoloration of the retinal purple by light, implying a certain time for its reconstitution—or the secretory regeneration of it by the hexagonal layer—sufficiently accounts for the greater or less persistance of the image.

As to the accidental negative images and their successive colored phases, the perfectly arbitrary explanation of the three orders of fibers, of Young, is naturally supplanted by the following mechanism. A given monochromatic light chemically alters in a constant and uniform manner the retinal purple which it encounters. The rod or primitive nervous element plunges its foot into the bath formed by this substance. The whole hypothesis is, therefore, limited to admitting that this nerve element possesses the faculty of being affected in a different manner by the intimate contact of different media, just as is the case with the papillae of the nerves of special sensation; just as the gustatory and olfactory nerves, for instance, appreciate or carry to the sensorium incitations as varied as the nature of the liquid or effluvia which attack their expansions. Inversely, when the primary cause—the luminous object—has been removed, the nerve fiber, in proportion as the chemical reconstitution of the retinal purple proceeds, testifies to the gradual revivification of the normal bath.

M. Giraud-Teulon concludes by indicating the resources which pathological physiology will find in the photo-chemical theory of vision, for the reformation of the theory of Daltonism, and the explanation of other normal and morbid phenomena in the history of colored entoptic sensations.

This "vision red," or purple, or *erythopsin*, as its discover names it, attains its maximum after a night's rest or sleep, or when an animal has been kept for some hours in darkness; it is soluble in solutions of the biliary acids and in glycerine; and

probably plays a part in the red reflection from the fundus of the eye seen in ophthalmoscopic examinations of the eye.

Pathology.

Renal Calculus largely composed of Indigo. (*Br. Med. Jour.*, July 27, 1878.)

In a clinical lecture at St. Thomas' Hospital, Dr. Ord exhibited two calculi, removed from the kidneys of a patient dying of malignant disease, one of which consisted very largely of indigo. That there was here no mistake, the application of several tests as well as spectrum analysis conclusively proved. More definitely, the calculus consisted of a matrix of calcic and magnesic phosphates, with a few remains of blood clot, the matrix being everywhere penetrated by indigo-blue and a little indigo red, while indigo blue was deposited in large proportion as incrustation.

With reference to the ætiology of this rare formation, the following is summarized from his lecture. Indican and indigo-blue are formed spontaneously in the urine, or by aid of acids and oxygen; hence the test for indican. As Schunk explains the process, it is thus:

$$\underset{\text{Indican.}}{C_{26}H_{31}N\,O_{17}} + 2\,H_2O = \underset{\text{Indigo-blue.}}{C_8H_5N\,O} + 3\,\underset{\text{Indiglucin.}}{C_6H_{10}O_6}$$

Indigo-blue has been found in the blood of man and animals. The appearance of indigogenous material in urine may be explained in two ways; it may be due to the ingestion of indigogenous material, or to the breaking down of nitrogenous matter in the body. The use of carbolic acid and creosote is often followed by a blackening of the urine, due to the above. The urine of starving animals, also, often contains it. It may be a derivative of blood pigment, or of albuminous bodies. Long ago Dr. Hassal pointed out the chemical similarity between the coloring matter of urine, indigo and blood pigment. Recent observations give reason to believe that indigo-blue in the urine is connected with the formation and subsequent oxydation of indol (C_8H_7N) in

the system. Indol is one of the results of the action of pancreatic juice on peptones, and is found in the fæces, which owe much of their odor to it. Its subcutaneous exhibition is followed by appearance of indigo blue in the urine. Pus, also, has often a greenish or bluish color, which is caused by the same material.

Comparing experimental with clinical observations it may be inferred that several conditions will cause excess of indigo in the system; defective gastric and intestinal chemistry, intestinal obstruction, diarrhœa, suppurations anywhere, but especially in the urinary tract, and morbid processes involving degeneration (amyloid, especially) or destruction of albuminous tissues or blood. In cholera obstruction, and in typhoid the quantity of indigo yielded by the urine is often very large.

It was suggested that, in this case, the indigo was found in the suppurating left kidney in the presence of an alkali, was absorbed and carried by the blood to the right kidney, and then deposited in the presence of uric acid. This was considered plausible. The patient had taken a little creosote, and he was markedly cachectic; thus the conditions were all favorable.

ON EXCISION OF THE PRIMITIVE SCLEROSIS OF SYPHILIS. Prof. H. Auspitz. (*Vierteljahresschrift für Derm. u. Syph.*, 1877.)

The author gives the history of 33 cases in which he excised the primitive induration. The operation was never followed by any evil result either local or general. On the contrary, locally, the cicatrix was often seen to present no induration, and when the excision did not prevent the outbreak of secondary accidents, there was always a delay in their appearance and a certain benignity.

In the 33 cases three were null; two were lost sight of and one had roseola at the time of operation, the object being microscopic examination of the ulcer.

In 20 cases no syphilitic manifestation appeared after excision; in 10 others secondary lesions appeared, with the benignity of character already mentioned.

In all these observations, taken for the most part from the

polyclinic at Vienna, the patients were followed four months, and sometimes eighteen months.

Auspitz concludes thus: "To prevent syphilis it is necessary to excise the initial sclerosis. It is necessary that this sclerosis should be recent, and not have presented other complication than the indolent inguinal adenitis which is always observed; it is necessary also that the operation and the dressings may be made easily."

THERAPEUTICS.

THERAPEUTICS OF DIPHTHERIA DURING THE YEAR 1877.—Ferrand. *L' Union Médicale*, July 9, 1878, page 37.

"The treatment of diphtheria is a question always open and always present, and unfortunately the constant progression of this terrible malady, of which the frequency and gravity appear to increase from year to year, imposes upon every physician the duty of devoting his attention to it." (Cadet de Gassicourt, in *Bull. de Thérap.*) Readers of the *Union Médicale*, in which the statistics are published every three months, by M. Besnier, may judge that these words are not exaggerated; they will then justify the care taken to observe the progress and the acquisitions of therapeutics in a matter where it may render such great services.

In presence of a disease in which the product possesses in a high degree, specific characters, it would seem that the search after a specific remedy should be permitted, and should be encouraged. Without wishing to introduce here this grave question of morbid specificity, we may be permitted, nevertheless, to observe, that there are diseases more specific still than diphtheria, less obscure in their causes, more constant in their effects, and in face of which one should give up the search after a specific remedy, and strive on the contrary, to progress in the rational search after agents capable of modifying the seat or physiological form of this disease.

The current which at present draws us toward anti-septics, is felt especially in the therapeutics of diphtheria. In presence of

a disease of which the principal objective character consists in an excrementitial production, so to speak, which deposits itself upon certain surfaces, spreads after the manner of a parasite, decomposes to a putrid magma, very certainly capable of a septic resorption, nothing is more natural than to think of employing anti-septics.

The good effects which have resulted from the atomization of carbolic acid in catarrhal affections of the respiratory organs (see my last review, *The Therapeutics of Phthisis in* 1877), should encourage the employment of such a method in the treatment of diphtheria.

With the same end in view, Dr. Créquy has proposed to the Therapeutic Society, not only the application of tannin in powder or collyrium, as Trousseau did, but also a fumigation by means of boiling water in which tannin has been deposited. It is known that the vapor of water carries with it a notable portion of tannin in its natural state.

The salicylate of sodium, tried internally by M. Cadet de Gassicourt (loc. cit.), has given results of but slight importance. Salicylic acid had already succeeded no better in the hands of M. Bergron.

In another communication to the Therapeutic Society Dr. Soulez has extolled carbolized camphor, which is nothing but a solution of camphor and carbolic acid in alcohol: 25 grams of camphor in powder dissolved in a mixture of 1 gram of alcohol and 9 of carbolic acid, constituting this medicament, which is used pure, or mixed with oil of almonds. On touching frequently with this mixture the false membrane of croup, it is soon seen to wither and disappear, leaving a simple ulceration, which heals rapidly. It will be seen that it is not solely an antiseptic M. Soulez has hit upon. At any rate, the four happy examples which he cites to support his theory encourage further trials of his remedy. It is not surprising that, antiseptic and balsamic at the same time, carbolized camphor should arrest the alteration of the morbid product once formed, and modify advantageously the secretions of the mucous membrane upon which it is produced.

It is in this way, indeed, that the most significant effects have been proved, and it is by means of chlorate of potassium that

they have been especially obtained. Since the remarkable labors of our regretted colleague, Isambert, chlorate of potassium has been constantly used in the treatment of angina and croup. Dr. Seligmuller praises it anew, and insists upon the efficaciousness of solutions of this salt. He recommends giving this solution free from all mixture, every hour at least, and considers all other means as capable of some moral effect, useful for the friends, but without real benefit to the patient. Cessation of fetidity of the mouth, disappearance gradually of the false membranes, reparation of the ulcerations, and finally rapid amelioration of the general condition, these are the effects which Seligmuller attributes to the internal use of chlorate of potassium.

Guided by the favorable local action of chlorate of potassium, Isambert considered it as a very useful element in the medication of diphtheria. Our author makes almost a specific of it. Without going so far as that, it may be admitted that chlorate of potassium has only a direct local action on the false membranes; its passage after absorption into the salivary glands and into the pharyngeal mucous membrane, which appear to be its place of elimination, certainly explain in great part its utility in the diverse anginas, and in diphtheritic angina. This utility is a fact which I have proven many times. I believe less in a favorable action of chloride of potassium upon the nutrition and general state of the subjects. I have often observed that the stomach tolerated it with difficulty, and I have encountered patients who refused to take it. Seligmuller himself recommends looking after the heart and digestive functions, which this agent may injure. But these reservations well known, I think it one of the most precious agents for combatting a malady which resists so many others: it acts as a modifier of the secretions of the mucous membrane diseased, and as an antiseptic on the products secreted by this membrane. As to its general action, and the oxygen which it brings into the blood, deprived of this gas by the bacteria of diphtheria, it is a fact which remains to be demonstrated.

Furthermore, the divers communications which have been made to the Therapeutic Society agree in praising the use of chlorate of potassium in the treatment of diphtheria. Bucquoy R. Blache, and myself, have insisted upon its good effects. In the compara-

tive study which he has made in his service at St. Eugénie, on the use of chlorate of potassium, cubebs, and salicylate of sodium, in the treatment of diphtheria, Cadet de Gassicourt does not hesitate to accord the first place to chlorate of potassium, which he regards as much superior to the others, without giving it heroically or as a specific. In a word, if there is any specific action, it appears to be only local, from direct action at the moment of ingestion, or secondary, at the moment of elimination. It is a species of therapeutic specificity which perhaps does not merit the name, but which we have already distinguished from a true specific action.

Dr. Trideau has returned, in the *Gazette Hebdom.*, to the utility which there is in the use of cubebs alone, or with copaiba, in diphtheria. These agents, it is true, are not easily taken; but well masked in a potion like the following: 15 grams of powder of cubebs, 50 grams of syrup, and 50 grams of Malaga wine, or as dragées, etc., they may serve as excellent adjuncts to the treatment, always difficult, and in which the physician must often use as much firmness as knowledge. The action of the balsams upon the respiratory mucous membrane is too evident to refuse putting them to use in these cases; but it would be a grave mistake to use them as specifics.

I might say as much of the tincture of eucalyptus, which Dr. Walcher has used and recommended (*Gaz. Méd. de Strasbourg*). After having prescribed an ipecac, he gives a syrup composed of 10 grams of the alcoholate of eucalyptus in 38 grams of simple syrup. This dose may even be exceeded in the twenty-four hours. No doubt the very exciting action of eucalyptus may modify advantageously the general state of the patient, at the same time that its toxic action, direct and by elimination, bears especially upon the diseased points.

All these agents, it may be seen, are drawn from the domain of the modifiers of the secreting surface and of its products of secretion; it is a local alterant action, or an antiseptic influence which is especially sought in them. For a long time we have remarked into what discredit the caustics properly so called have fallen. Nevertheless, the elder Guillon does not appear to share this opinion; for, since 1828 he has not ceased to treat diphthe-

ritic pharyngitis by insufflations of powdered nitrate of silver. (*Gaz. méd. de l'Algérie.*) This physician recommends even to extend the insufflation not only to the diphtheritic surfaces, but also above and below them, and by that he thinks to prevent extension. I can scarcely share his confidence. Having seen many times with what facility diphtheria spreads to the mucous and even cutaneous surfaces, when they are the seat of any inflammatory irritation, and above all when they begin to ulcerate, I always feared that the action of the caustic, whether superficial or destructive, might offer to the diphtheria new surfaces which it is already too much disposed to invade, and to open with them new doors to septic or specific resorption. Therefore, for a long time I have employed as a toxic a collyrium made with powder of cinchona, as I have seen my preceptor, Dr. Delpech, do. With Rose Cormack elsewhere (*Edinburgh Med. Journ.*), I believe the most inoffensive toxics are the best; and I limit myself by preference to those which he advises; a mixture of glycerine and borax, or an acidulous solution (hydrochloric acid), or alkaline (lime water), or neuter (sulphate of sodium), all very dilute. I believe even that the passage from one to the other of these means is often useful, in face of an inflamed mucous membrane, of which the vascularization modifies itself better under the alternate action of divers toxics, than by an action always the same, whatever its efficacy.

CONCERNING THE ADMINISTRATION OF QUININE. (*The Doctor, Sept.* 1, 1878.)

According to Mr. Batterbury one grain of quin. sulph. dissolved in an ounce of milk hardly renders it bitter; two or three grains only slightly so. Five grains may be taken in a tumblerfull without any unpleasant sensations.

Mr. Collier proposes the use of the kinate of quinia for hypodermic use, this salt being soluble in three or four parts of water. He prepares a basic kinate from the calcic kinate, and adds to it, in solution, the quinia sulphate in powder, procuring the amorphous kinate by evaporation. This is subsequently readily prepared for use. It possesses the two great attributes of solubility and neutrality.

M. Yvon recommends the lactate of quinia for use in the same manner, while the sulphorinate is also stated to be suitable for the same purpose.

With reference to the administration of the drug to nursing women, M. Burdel finds that the drug is absorbed more rapidly when given on an empty stomach, less so when given with the food—i. e., it appears in the mother's milk in larger or smaller proportion, according to the time it was ingested. So that when it becomes necessary to administer quinine soon after delivery, its injurious effects may be avoided by giving it with meals, or with some food, and by emptying the mother's breast with the pump three hours after the dose.

Infants at the breast never suffer from malaria, no matter how cachectic the mother, until after the fourth month; this immunity may last to the period of dentition.

CODEIA IN CANCER OF THE PYLORUS. (*New Remedies.*)

Professor Austin Flint recommends 0.06 of codeia most highly, in cancers of the outlet of the stomach, saying that in such a case it completely stopped the emesis and pain, and the patient even thought the tumor was decreasing in size.

HEINSCH'S SUGAR TEST FOR DANGEROUS ORGANIC MATTER IN WATER.

Place a quantity of the water in a clean, glass stoppered bottle; add a few grains of pure sugar, and expose to the light in a window of a warm room. If the water becomes turbid, even after exposure for a week, reject it; if it remains clear it is safe.

AMMONIO-SULPHATE OF COPPER IN EPILEPTIFORM FACIAL NEURALGIA.

Frère, of the Lariboisière, has found this, in doses of 0.07 twice a day, succeed well, when other means had failed. In one case 0.10 were given at one dose.

WARTS.

Dr. Craig, of Montreal, recommends a four per cent. solution of chloral hydrate, as a painless but effectual application to warts.

New Instruments.

Rapid and Forcible Dilatation of Cervical Canal for Removal of Offending Bodies. With Descriptions of Instruments for the Purpose. By H. T. Hanks, M. D., New York.—Two years ago, a patient of Dr. W. H Hall, who had previously suffered from epilepsy, became pregnant. She had given birth to two healthy children before, and had carried them to full term without serious inconvenience to herself. At this time, however, the epileptic seizures became exceedingly frequent and alarmingly severe—so much so, indeed, that Dr. Hall and myself both decided that, since medicines had apparently no control in averting the attacks or mitigating their severity, the only safe and judicious course to pursue would be to cause the expulsion of the two months fœtus. The patient lived a few miles out of the city, and it was the wish of the family that Dr. Hall and myself should take full charge of the case without calling in the local physician. Under these circumstances, it became a question with me how to safely and thoroughly accomplish this end and make but one visit myself, and cause as little journeying as possible for Dr. Hall, and not oblige any physician to call until the following day.

I finally decided to rapidly and forcibly dilate the canal, give a full dose of ergot hypodermically, and then remove the ovum by means of the placenta forceps or loop of wire.

Knowing how little dependence can be placed upon Molesworth's, Barnes', or the soft rubber air dilators, when they have been once in use and laid aside for a few months, and knowing from experience how well the healthy unimpregnated cervix uteri will bear rapid dilatation up to No. 24, American scale of bougies, without laceration, I decided to dilate in this case in the most rapid manner possible without injury to the parts involved.

We therefore anæsthetized the patient, introduced a speculum, seized the anterior lip, and in regular order introduced the common hard rubber dilators (see *Medical Record*, Sept. 25, 1875,

page 655), from No. 16 up to No. 22, then changed to the smaller sized rectal bougie, and from this to the next larger, and so on up to No. 10. At this time a full dose of fluid extract of ergot was given hypodermically, after which the placenta forceps were introduced and the ovum was quickly removed. The whole operation did not last forty-five minutes.

The patient made a quick and in every way satisfactory recovery.

Since this time I have witnessed the bursting of several of Molesworth's and Barnes' dilators, and I thought much of hard rubber dilators, to take the place of these perishable soft rubber ones. I have therefore had the Messrs. Stohlmann, Pfarre & Co., of this city, manufacture for me a set of *ten* dilators, attached to a double-curved handle.

Each dilator is hollow and more or less ovoid according to its size. The length varies from $6\frac{1}{2}$ to $8\frac{1}{2}$ ctm.; the diameter from 12 m. m. to 5 cm., in proportion to the length. The larger end of each is made to fit either end of the screw-handle rod, which is curved in opposite directions at each extremity, flattened on one side, for security of grasp, and about 13 ctm. in length.

In using these dilators, it is absolutely necessary to have a strong tenaculum forceps in order to firmly fix the cervix. The Messrs. Stohlmann, Pfarre & Co. have made for me a very convenient tenaculum forceps, which will be found to fully meet the requirements of each case, and has never yet been known to tear the cervix.

With this instrument I seize the anterior lip—one blade inside, the other opposite—fully 1 m. m. from the external os, and firmly fix the cervix, either with or without the use of a speculum, according as it is expected to have much or little trouble in removing the contents of the uterus. I then gently but firmly force the smallest dilator into and through the external os, and entirely enter the cervical canal. This end is then withdrawn, and the opposite and next larger dilator is in like manner pushed into the canal. When this end is tightly held within the canal, the smallest dilator, which is now grasped by the hand, is unscrewed and a larger one is screwed in its place. Then the ends are again reversed, and the same course is pursued until

the canal is of sufficient size to allow the quick and safe removal of the offending body.

I have used this set of dilators with entire satisfaction in four cases. One patient I saw in consultation with Dr. J. R. Cypert, one in consultation with Dr. D. C. Comstock, and two in my own private practice, besides the one patient in which I used the rectal bougies as before mentioned, and in which the operation consisted in dilating in a similar manner.

The patient of Dr. Cypert had carried a dead three months fœtus for several weeks when the doctor first saw her. She had lost much blood. He applied a tampon after introducing a small sponge-tent. On the following day I saw the lady with him, and on giving ether we easily dilated with these instruments here described, and in about thirty minutes removed the bones and some other portions of the dead fœtus.

The patient made a good recovery.

Dr. Comstock's patient was six weeks pregnant when attacked with uterine hæmorrhage. He applied a tampon and gave anodynes. She had but little subsequent hæmorrhage, but suffered from slight backache pains, and an offensive, dark-colored discharge from the vagina. On my visit I found the external os the size of the little finger, while the internal os was well dilated, and by making firm pressure a loose, fleshy body, the size of a pigeon's egg, could be felt near the dilated internal os. The patient was in good physical condition, and we decided to deliver the ovum without giving ether or using a speculum. The anterior lip was seized with but little difficulty, and the four smaller sizes of the dilators in regular order quickly introduced, and in exactly sixteen minutes from the time I took my place at her side the ovum was removed. It was found to have been filled with a large clot of blood which had completely obliterated the embryo.

My own cases were much like this last. In both, the question of relieving the patient from the danger of hæmorrhage and hours of suffering, together with the saving of much time for myself, came up, and was decided for me by the patients, who were eager to have the anxiety and suffering ended.

One patient had lost "great quantities" of blood before my

arrival. The instruments were used in both cases without ether, with success, and both patients did well.

In conclusion, I can recommend the dilators, and should advise their use, where the cervix is healthy, and it is necessary to remove:

1. A retained small or large piece of placenta.
2. A fibrous polypus or tumor.
3. An aborted ovum or dead fœtus.

Even in cases where the child is viable, and it is found necessary (as in placenta prævia) to dilate rapidly, I am certain these instruments would accomplish quickly and safely, in judicious hands, what no other dilators have ever done.

For sale by Messrs. Sharp & Smith.

DESCRIPTION OF A FLEXIBLE METALLIC UTERINE SOUND AND A FLEXIBLE METALLIC PROBE.—BY EDWARD W. JENKS, M. D., Professor of Medical and Surgical Diseases of Women, and Obstetrics in Detroit Medical College.—Every one who has had occasion to explore the uterus where there were any adventitious growths within it, or where from any cause there was an abnormality in either the direction or length of its cavity, can well appreciate the value at times of a flexible uterine sound as a diagnostic aid. Silver, copper, lead, whalebone, rubber, and various other substances have been used as materials of which were manufactured uterine sounds that could be easily bent so as to fit into the sinuostities of the uterine cavity. In flexures of the uterus a sound that is capable of being adapted to the angular-shaped cavity is sometimes an important desideratum. It is needless to write at any length of the value of flexible uterine sounds or the variety of conditions where they can be advantageously used in diagnosis.

I venture to describe very briefly a flexible uterine sound and a probe, both of which I have used with so much satisfaction for several months that I believe they possess merits which will commend them to the profession.

The sound is 32 ctm. in length, including the hard rubber handle; the material of which the sound is composed is white metal; the entire instrument, including the handle, is hollow.

At the uterine end only, for a distance of 9½ ctm., is there flexibility. The flexibility is effected by a thin strip of metal wound in a spiral manner, and yet when thus wound the shape is the same as the ordinary uterine sound.

There is also upon the sound a scale of inches and fraction, with a slide and screw, by which means the operator can tell while it is within the uterus the depth to which it has entered.

This instrument can also be used as a medium for making liquid topical applications to the uterine cavity. At one portion of the handle, the nozzle of an ordinary hypodermic syringe can be inserted and fluid conveyed through the length of the sound until the spiral is reached, when it escapes through the interstices in a similar manner as from a uterine drop syringe. The instrument in a similar manner can be cleansed and then all danger of conveying infection from one patient to another avoided.

The probe is composed of the same material as the sound, the principal differences are size and shape. The diameter of the probe is the same as the ordinary silver uterine probe, its length is 25 ctm. including the handle; 11½ ctm. of the uterine end is spiral and flexible. A small bulb on the spiral indicates the normal depth of the uterine canal. This probe like the sound is hollow and like it, a syringe can be used at the handle for making applications to the uterine cavity. I have found this a valuable instrument for use elsewhere than in the uterus. I have used it to explore abscesses about the pelvis and elsewhere, also have made it the medium for carbolizing sinuses and deep-seated abscesses; any fluid inserted in the opening of the handle escapes through the spaces of the spiral, and through a small hole at the other end of the probe. The instrument thus serves other purposes than that of a probe.

For sale by Messrs Sharp & Smith.

I EARLY adopted, on antizymotic principles, the administration of from 10 to 30 drops every two, three or four hours, of *sulphurous acid* diluted, in scarlet fever. I treated eleven *severe* cases. The ten treated after its adoption recovered.— *Waterman.*

Items.

AMERICAN SCIENCE.—There are two names in the extended and honored list of American *savants* which every student regards with the highest respect and pride; we allude to Professor Gray, of Cambridge, and Professor Dana, of Yale. These two investigators in different fields have done more to make American science respected the world over than any others; and they may be justly regarded as the highest living authorities in the departments of science in which they have labored. The great works to which they have devoted their lives are standard and authoritative among educated men everywhere, and will continue to be long after their authors have passed away. The "Mineralogy" of Dana, and Gray's "Botany," form as thorough and exhaustive compendiums of two departments of science as the present stage of learning affords. They are vast storehouses in which are hoarded the ripest scholarship and the results of the widest researches of the age.

These two distinguished men are now in the evening of life, but still hard at work. Every hour of every day finds them either in their cabinets among their rare collections of specimens, in the field, or at their desks; and we can only hope that life and strength may be spared to them for many years, that they may make further and even richer contributions to human knowledge. Great learning and exhaustive intellectual labor, as far as our observation extends, do not produce unsocial habits of life, or pride of position, or arrogance; on the contrary, the truly great man in science or literature is in a marked degree genial and condescending. The men under consideration are in social life simple, modest, kind, generous, approachable. Such noble natures

have no place for the pedantries and follies which environ little minds, when fortuitous circumstances bring them into notice. The earnest seeker after knowledge, however humble or untaught, never meets with rude rebuffs from the truly learned; they are the helpers and patrons of the lowly, if capable and honest.

It is not unusual to honor in some public manner our distinguished poets and literary writers at certain important epochs in their lives, and we know the suggestion that in like manner we remember those who by their researches in science have shed such high honor upon the American name will be gladly received. It is true, no garlands we can weave will add to the lustre of the names of our great scientists, but some appropriate mark of public appreciation of their labors and acquirements it would be delightful to bestow,—a delight which might not be denied us by those so deserving of our homage and respect.—*Exch.*

A SECULAR view of the controversy between certain members of the Association of Superintendents of Insane Asylums and certain specialists in nervous diseases, is given in the following article from the *Utica Morning Herald:*

"Our news columns have contained mention of proceedings for libel against Dr. John P. Gray, of the State Lunatic Asylum, in behalf of Dr. W. A. Hammond, of New York. The case may command some attention, and deserves further notice. The basis of the suit is an address written by Dr. Eugene Grissom, superintendent of the Insane Asylum for North Carolina at Raleigh. This was printed in the *American Journal of Insanity*, published by the State Asylum, and of which Dr. Gray, as superintendent, is the editor. This address was printed as a paper read before the American Association of Medical Superintendents of the Insane, held in Washington last May. The paper was the subject of some discussion in that body, and was reported at some length in the Washington newspapers. Dr. Hammond made it the text of an open letter addressed to Dr. Grissom, in which he revels in vituperative language. In his address, Dr. Grissom does not mention the name of Dr. Hammond, but describes with sharp lines the "false expert," and cites certain passages in the works and career of Dr. Hammond

in illustration. To Dr. Hammond's open letter, Dr. Grissom made reply in print, and applied his address with more directness to Dr. Hammond. Both gentlemen are pretty free of speech, and both express very moderate estimates of each other. Dr. Hammond, by rushing into print in response to Dr. Grissom's address, at first put his case before the tribunal of readers. It may be because he feels himself worsted there that he goes to the courts.

"So far as Dr. Gray is concerned, the verdict of all who will examine the facts must be that he has in no way transgressed the strictest code of etiquette, much less any statute. In accordance with uniform custom, there were accepted for publication in the *Journal of Insanity* the official proceedings of the American Association of Medical Superintendents of the Insane, and this address and the debate upon it were parts of that report. Such a document could hardly be refused, and any injury which Dr. Hammond has sustained must date back to the association. The position of Dr. Gray is different from that of editors in general. The *Journal of Insanity* is the property of the State, and his connection with it is solely as the servant of the State.

"Dr. Hammond seeks notoriety, and his purpose in this libel suit may be to secure attention where he has not been able to compel it otherwise. In view of his published response to the address of which he complains, no jury in the world would award him a copper of damages.

THE FOLLOWING CIRCULAR LETTERS will be read with interest:

WAR DEPARTMENT,
SURGEON GENERAL'S OFFICE,
Washington, Sept. 28, 1878.

GENERAL JOSEPH K. BARNES,
Surgeon General, U. S. Army.

GENERAL:—I have the honor to submit the following suggestions with regard to the approaching United States Census, and to request that if they shall seem to you worthy of attention, they may be brought to the notice of the Congressional Committees which have the subject under consideration.

Having been consulted on certain points relating to the mor tality statistics of the last census, I have given special attention to their probable value as affording a means of judging of the condition of the public health, and of the prevalence of certain causes of disease in different localities, and as a result of this examination, it appears to me that interesting as they are, it would be possible to obtain data much more valuable, from both a scientific and economic point of view, in relation to the health of the people of the United States.

As is pointed out by the Royal Sanitary Commission of England, "however complete the registration of deaths may be, it cannot give a fair estimate of the sickness which is not fatal, it cannot indicate where or how these are to be prevented, it cannot tell the cost which is worth incurring for their diminution."

It is probable that results of the greatest interest and value might be obtained from a record of sickness, and especially of those forms which are known to be due to contagion or to special local conditions.

So far as I can learn, the only attempts to obtain a registration of disease in connection with a national census have been made in Ireland, where the disease with which each individual is suffering on the day of the count is recorded; and in Portugal, where a query is inserted as to sickness, but in what precise form I have not been able to ascertain.

As chairman of the Section of Hygiene and State Medicine of the American Medical Association, I have corresponded with a number of the members of the section, and with other skilled sanitarians, all of whom unite in the opinion that it is possible in the next census to obtain some data with regard to disease which will inaugurate a new branch of statistics in this country, and that it is highly desirable that the general government should take the lead in this matter.

The principal difficulty has been to obtain substantial agreement as to the questions upon which information is most desired, keeping in view the fact that these questions are to be asked and answered by unprofessional men.

As the result of the conferences above alluded to, and of careful study of what is practicable as well as what is desirable, I

venture to suggest the following five queries as being, if not the best, at least such as will bring out a vast amount of information which will be extremely interesting and useful to the political economist, the sanitarian and the physician.

The amount of information which moderately complete answers to them will give, is not to be estimated from the questions themselves only—for it should be remembered that of each individual to whom these queries apply, the age, sex, color, parentage and occupation are also recorded in the schedules now in use, and hence the influence of these conditions separate or combined upon the diseases to which my proposed queries relate can be made to appear in various ways.

The queries suggested are as follows:

1st. Number of days during past year in which the person was unable to follow his or her usual occupation on account of disease (D) or injuries (I). (Attendance at school considered as an occupation.)

2d. Is the person sick on the 30th day of June; if so, name disease or injury.

3d. Is the case being treated in hospital (H), by a physician from a dispensary or public charity (C), by a private physician (P) or without a physician (N).

4th. Has the person during the past year had any of the following diseases, viz: Small pox or varioloid (S P or V); scarlet fever (Sc); measles (Me); diphtheria (D); typhoid fever (T F); malarial fever (M F) (includes ague, bilious fever and remittent fever); yellow fever (Y F); acute lung diseases (L D) (includes lung fever, pheumonia and pleurisy); acute rheumatism (A R); cerebro-spinal-meningitis (C S M).

5th. What has been the cost to the person (or head of the family on his account) during the past year from sickness, in—

a. Loss of wages or salary?

b. Cost of medical attendance, medicines and nursing?

These queries for the most part are self-explanatory. The second question is that used in the Irish census, the name of the disease being entered in the persons' own words (in Ireland it is often entered in Irish) leaving it to an expert at the central office to classify it as best he can. The fifth query can in most cases

be answered only approximately, but for the working classes, at all events, the answers will be near enough to the truth to be of value. Very respectfully, your obedient servant,

(Signed) J. S. BILLINGS,
Surgeon, U. S. Army.

WASHINGTON, D. C., October —, 1878.

It has become a custom that the chairman of the section of hygiene and state medicine of the American Medical Association shall propose subjects for the special attention of the section.

In accordance with this custom, I would respectfully suggest the following subjects for consideration at the next meeting, viz:

I. State and Municipal Organizations for Public Hygiene, and their relations to Practitioners of Medicine.

II. Vital Statistics; including Statistics of Disease.

III. The Causation and Prevention of Yellow Fever.

Under the first heading, papers are promised upon: (a) The proper organizations of boards of health. (b) The relations of the Massachusetts system of medical examiners to boards of health. (c) The relation of State control of medical education to boards of health. (d) The relations of the code of ethics to State and municipal sanitary organizations.

The address of the chairman of the section will relate mainly to the second heading, and in this connection your attention is respectfully invited to the inclosed proposal for obtaining some statistics of disease in the next census, and if you approve of it, it is hoped that you will use your influence in its favor with Congress.

Under the third heading, the lessons of the recent epidemic and methods of investigation of yellow fever, will be considered.

Your assistance in the work thus indicated is respectfully requested. Please notify me as to whether you will undertake to prepare a paper for the section, or to aid in the discussions, indicating also the subject which you have selected.

Very respectfully and truly yours,

J. S. BILLINGS,
Surgeon U. S. Army, and Chairman of the Section of Hygiene, American Medical Association.

MESSRS. E. H. SARGENT & Co., dispensing chemists of this city, have republished, at their own expense, the valuable pamphlet on Metric Weights and Measures for Medical and Pharmacal Purposes, originally prepared for the U. S. Marine Hospital service, by Oscar Oldberg, Phar. D. It is intended to furnish a copy of this pamphlet to all reputable physicians in Chicago who desire to obtain it.

In this commendable enterprise Messrs. E. H. Sargent & Co. have taken a step which not only will greatly aid in extending a knowledge of the metric system, but which reflects great credit upon themselves. The JOURNAL AND EXAMINER takes pleasure in extending to them its congratulations.

POLITICS AND SCIENCE.—Dr. A. W. Heise, who has held the office of physician to the Illinois State Penitentiary at Joliet for the past three years, was lately deposed from office "by reason of expiration of term of service."

Dr. Heise managed the medical affairs of the penitentiary with credit to the institution and himself. He instituted sanitary regulations which practically abolished endemic and epidemic disease within the prison. The ratio of sick in hospital is said to be lower than that of any other prison in the United States, as shown by his annual report, there being an average of six hospital cases from an average number of convicts amounting to over 1,700.

The commissioners have appointed a "homœopathist" to take the place of the prison physician.

DOUBTFUL NOVELTIES.—Dr. W. P. Gibbons, of California, does a good work in the October number of the Pacific *Medical and Surgical Journal*, by exposing the pretended new remedies from California called *Yerba Santa*, *Berberis Aquifolium*, *Cascara Sagrado* and *Yerba Reuma*. They have been pushed on the profession by a Dr. I. H. Bundy, and by the efforts of Parke, Davis & Co., of Detroit. We regret to add that several medical editors have either been entrapped or have deliberately been bargained into giving their sanction and aid to this form of mercantile exploitation of the profession and their patients.—*Med. & Surg. Rep.*

Obituary.

DR. LUCIUS CLARK, of Rockford, died at his residence Tuesday evening, Nov. 5, 1878, after an illnes of nearly three months, in the 66th year of his age. On August 22d he suffered a paralytic stroke, and on Monday evening, Nov. 4, he began failing rapidly and continued to decline until Tuesday morning, when he became unconscious, and remained in that condition until he expired.

Dr. Clark was of Massachusetts parentage; was born in Amherst, June 10, 1813, and was educated there. He pursued his medical studies at Berkshire Medical College, Mass., and at Geneva Medical College, N. Y., where he received the first diploma given by that institution. He practiced in Western New York, at Marion, Palmyra and Chili, for 10 years; finally removed to Rockford in 1845, where he resided and was in active practice until his death. He was a member of the American Medical Association, and of the Illinois State Medical Society, and during the war was in the field a short time as president of the board of examining surgeons for the State of Illinois. He was a trustee of Rockford Female Seminary from its organization. In 1836 he married Julia A. Adams, of Hinsdale, Mass., who died in 1861. In 1864 he married Charlotte M. Townsend, of this city.

The deceased had four brothers, two of whom are physicians, Dr. E. N. Clark, of Beloit, and Dr. Asahel Clark, of Detroit, Michigan. He has two sons who are also practicing physicians, Dr. L. A. Clark, of San Francisco, Cal., and Dr. D. S. Clark, of Rockford. He also leaves a wife and two young daughters. Dr. Clark having been a resident of Rockford for 33 years, was widely known, and was very highly esteemed by all with whom he came in contact. A wide circle of friends mourn his loss.

At a special meeting of the Rockford Medical Association, Nov. 6, 1878, the following resolutions were unanimously adopted:

WHEREAS, This Association has learned with deep regret of the loss of one of its oldest and most valued and respected members, in the death of Dr. Lucius Clark, who for a third of a century has been a zealous co-worker in our midst;

Resolved, That we recognize in this event the departure from among us of one who for many years was an ornament to this Society, to the profession of medicine, and to the community at large.

Resolved, That we extend to his afflicted family in this their bereavement the tribute of our earnest sympathy, and assure them that we will ever cherish his memory in kindest regard.

Resolved, That as a token of our respect for the departed, this Association, as such, attend the funeral.

Resolved, That a copy of these resolutions be presented to the family, and sent to the local press, and CHICAGO MEDICAL JOURNAL AND EXAMINER, for publication.

A. M. CATLIN, *President*,
H. W. TEBBETTS, *Secretary*.

AT a meeting of the senior class of the Chicago Medical College, the following resolutions were passed:

WHEREAS, In view of the loss we have sustained by the decease of our friend and classmate, Oliver L. Latta, and of the still heavier loss sustained by those who were nearest and dearest to him; therefore, be it

Resolved, That it is but a just tribute to the memory of the departed to say that in regretting his removal from our midst we mourn for one who was in every way worthy of our respect and regard.

Resolved, That we sincerely condole with the family of the deceased on the dispensation with which it has pleased Divine Providence to afflict them, and commend them for consolation to Him who orders all things for the best, and whose chastisements are meant in mercy.

Resolved, That copies of this heartfelt testimonial of our sympathy and sorrow be forwarded to the parents of our departed friend, to the Goshen papers, and to the CHICAGO MEDICAL JOURNAL AND EXAMINER, for publication.

C. H. BRYANT,
C. H. FEYERS,
J. M. WILCOX.
Committee.

NOV. 6, 1878.

ANNOUNCEMENTS FOR THE MONTH.

SOCIETY MEETINGS.

Chicago Medical Society—Mondays, Dec. 9 and 23.
West Chicago Medical Society—Mondays, Dec. 16 and 30.

CLINICS.

MONDAY.

Eye and Ear Infirmary—2 p. m., Ophthalmological, by Prof. Holmes; 3 p. m., Otological, by Prof. Jones.
Mercy Hospital—1:30 p. m., Surgical, by Prof. Andrews.
Rush Medical College—2 p. m., Dermatological and Venereal, by Dr. Hyde; 3 p. m., Medical, by Dr. Bridge.
Woman's Medical College—2 p. m., Dermatological, by Dr. Maynard.

TUESDAY.

Mercy Hospital—1:30 p. m., Medical, by Prof. Hollister.

WEDNESDAY.

Chicago Medical College—1:30 p. m., Eye and Ear, by Prof. Jones.
Eye and Ear Infirmary—2 p. m., Ophthalmological, by Dr. Hotz.

THURSDAY.

Chicago Medical College—1:30 p. m., Medical, by Prof. Quine.
Rush Medical College—3 p. m., Diseases of the Nervous System, by Prof. Lyman; 4 p. m., Diseases of the Chest, by Prof. Ross.

FRIDAY.

Mercy Hospital—1:30 p. m., Medical, by Prof. Davis.

SATURDAY.

Rush Medical College—2 p. m., Surgical, by Prof. Gunn.
Chicago Medical College—2 p. m., Surgical, by Prof. Isham; 3 p. m., Neurological, by Prof. Jewell.
Woman's Medical College—11 a. m., Ophthalmological, by Dr. Montgomery.

Daily Clinics, from 2 to 4 p. m., at the Central Free Dispensary, and at the South Side Dispensary.